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ABSTRACT

Nutrition and health are underlying influences to education performance. This report is a collection and analysis of data on nutrition and the rural poor in the United States. It presents an empirical assessment of critical nutritional and social-service problems experienced by the rural poor population. The first section of the report uses data from two federal surveys to analyze the frequency of low-income rural America's intake of vegetables, nutrients, and selected fruit and vegetable groups. Section two includes survey information, literature reviews, and data analyses on barriers to participation by the rural poor in four key food-assistance programs. Results indicate that impoverished rural residents experience more nutritional problems than higher-income individuals and, often, more problems than the urban poor. Sources of vitamins A and C for the rural poor are especially inadequate. The disproportionate effect of poverty on the nutritional intake was greatest among children, especially the youngest group (2-5 years). Nutritional inadequacy was also greater among females than males. In the states surveyed, only 9.6% of America's poor children were served by the Summer Food Service Program compared with 11.8% of the metropolitan poor. The most critical barriers to participation by rural children were a lack of private non-profit sponsors, lack of outreach funding, insufficient reimbursement rates for rural areas, and eligibility rules that were too stringent. Similar administrative and logistical barriers are cited for the food stamp, Temporary Emergency Food Assistance, and food bank programs. The document recommends more private sponsorship, improved outreach efforts, and increased funding for rural food-service sites. (TES)

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PATTERNS OF RISK: THE NUTRITIONAL STATUS OF THE RURAL POOR

A Report by Public Voice for Food and Health Policy

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Photographs presented on the cover and throughout the report were taken by Jeffrey Shotland.

FOREWORD BY SENATOR PATRICK LEAHY

The 1970's and the 1980's are decades in contrast for rural America.

In the 1970's, strong demand for basic farm and energy commodities and a healthy rural manufacturing sector raised rural income levels. These positive economic trends, combined with a nationwide commitment to expanding nutrition programs greatly reduced, if not eliminated hunger in rural America.

The 1980's brought the most severe agricultural recession in decades. Energy prices plummeted and rural manufacturing stagnated. The poverty issuing from these economic trends, combined with major cutbacks in federal nutrition and housing programs, have spread the crisis of homelessness and hunger from our cities into rural America.

It was these disturbing developments that led Public Voice to conclude in this report that, "America's rural economy is in the midst of the most severe crisis since the Great Depression." To make matters worse, "American children comprise the Nation's largest and most deeply impoverished age group," and those living in rural America are the worst off -- high infant mortality rates, low birthweights, lack of access to nutrition programs, and high levels of malnutrition.

I commend Public Voice for writing this third in a series of reports on malnutrition in rural America. The two prior reports, "Rising Poverty, Declining Health," "Profiles of Rural Poverty" and this report, "Patterns of Risk: The Nutritional Status of the Rural Poor," document the rise in poverty and malnutrition in rural America.

The recommendations contained in this report -- to make the food stamp and other nutrition programs such as the School Breakfast Program, the Summer Food Service Program, the Women, Infants and Children Supplemental Feeding Program and the Child Care Food Program -- more accessible to the rural poor, must be addressed. I believe that the Congress can and will respond.

America can eliminate hunger, if we will.

Patrick Leahy

SENATOR PATRICK LEAHY
Chairman
Senate Committee on Agriculture, Nutrition and Forestry

PREFACE

Since 1984, Public Voice has examined the severe nutritional health conditions experienced by the rural poor through comprehensive collection and analysis of nutritional data previously untapped for what it could reveal about the rural poor. This report furthers our ground-breaking work in this critical and-- until 1986 -- largely unheralded area. It does so by painting in more detail an even bleaker picture of the current health status-- and prospects for improving that status -- among this desperate population.

The following pages present an empirical assessment of several of the most critical nutritional problems experienced by the rural poor. Analyses of food consumption trends are followed by an examination of the key barriers that prevent greater rural poor participation in the food assistance programs designed to serve them. Finally, the report presents solutions targeted to address the problems revealed for each program.

In its entirety, this new study forms a data source book on both food consumption patterns among the rural poor and patterns of assistance program participation that will be invaluable to policymakers, advocates and researchers seeking to design strategies to improve the nutritional environment of the rural poor.

The report comes at a time when America's rural economy is in the midst of the most severe crisis since the Great Depression. Unlike the nation's urban areas, which overall have experienced a modest decline in poverty rates during the past three years, rural areas have been left out of this "economic recovery." Further, these problems--for the most part--have gone unrecognized by health professionals and policymakers, and often are misunderstood by the public.

We seek here to reveal the critical problems, present workable solutions and dispel myths that serve to impede nutritional assistance to rural America. In the process, we continue in our commitment to the creation of a reliable knowledge base in this previously forgotten area--the nutritional status of the rural poor.

Ellen Haas
Executive Director, Public Voice

Jeffrey Shotland
Director of Research

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Chapter I
Introduction

The worsening nutritional status of our nation's rural poor is cause for alarm. An emerging body of research on this large but dispersed population has found that it suffers the consequences of chronic malnutrition at an alarming rate, and that its status continues to deteriorate.

This report represents the progression of work, begun by Public Voice in late 1984, to create a reliable body of information on the nutritional environment experienced by America's impoverished rural population. Spurred by the scarcity of sound information on the health and nutritional conditions they face and the economic crisis overtaking rural America, we set out that year to conduct a systematic investigation of the nutritional status of the rural poor.

Our initial research in 1985-1986 involved a general examination of the nutritional environment faced by the rural poor. It identified a diverse range of nutrition-related problems experienced by this group. This phase of our research builds upon and expands those earlier findings by examining some crucial gaps, including:

--the extent to which the major socio-demographic groups comprising the rural poor differ with regard to dietary consumption of key nutrients identified as being most problematic among this population;

--the extent of underutilization of food, health and income assistance programs by the rural poor; and

--the major barriers that cause the disproportionately low participation levels by the rural poor in these programs;

--the extent to which rural residence compared to urban residence is associated with a larger negative influence of poverty on nutritional status and dietary adequacy.

BACKGROUND

Public Voice's preliminary study on low birthweight and infant mortality rates and the report, Rising Poverty, Declining Health: The Nutritional Status of the Rural Poor released in the Spring of 1986, documented for the first time the negative health

effects of the chronic and unabated inadequacies in nutrition, sanitation and health care experienced by this population.

Our goals in that undertaking were three-fold:

--to gather and analyze data from which to generate policies and programs more responsive to the specific conditions and needs of the rural poor;

--to raise the level of awareness among public health, nutrition, social welfare and anti-hunger professionals about the magnitude and urgency of health and nutritional problems facing the rural poor; and

-- to generate heightened interest among other researchers who could further expand upon our findings.

The key problems identified in that first study include:

- o growth retardation among children
- o biochemical evidence of nutrient deficiencies such as iron deficiency anemia
- o increased rates of low birthweight infants
- o increased rates of infant mortality

In fact, as described later, each of the key indicators of nutritional status that we analyzed demonstrated a pattern of increased risk among the rural poor population.

RATIONALE FOR PRESENT ANALYSIS

This phase of our research builds upon and expands the earlier findings by examining more closely the crucial gaps identified in the initial study. In this study, we move from an assessment of general nutritional status to an analysis of how that status is achieved and, ultimately, to an examination of the intervention strategies currently in place that could affect their nutritional status.

Given the magnitude of the negative nutrition-related health outcomes experienced by the rural poor, and our findings from the field of specific "rural factors" impacting rural residents' access to certain foods, we designed a study to identify the most serious nutritional problems and the principal dietary shortcomings that are related to these problems.

We then examined the association of poor dietary status with key demographic variables. The goals of this phase of our work were: to identify the highest risk subgroups among the rural poor, to identify the specific dietary inadequacies they face, and to identify the primary determinants of low rural participation in key food assistance programs.

As in the initial study, the focus of this report is limited to undernutrition. We concentrated upon those nutrition problems in which access and resource limitations (such as income, local availability, etc.) rather than dietary habits, are likely to be the primary causal factors. Therefore, the study does not address diet-related problems such as high blood pressure, diabetes, excessive consumption of sodium and fat which are also serious problems among the rural poor. We stress that these problems also merit thorough examination among this population.

DEFINITIONS USED IN THE REPORT

Metropolitan/Nonmetropolitan vs. Rural/Urban

Throughout the report, the terms metro/nonmetro and urban/rural are used interchangeably. All are based on the Bureau of the Census definitions of metropolitan and nonmetropolitan areas:

Metropolitan Areas: Counties that are part of a Metropolitan Statistical Area. (See Metropolitan Statistical Area).

Metropolitan Statistical Area (MSA): An MSA is a county or group of counties containing at least one central city with a population of 50,000 or more, or a central city with a population of at least 25,000 if the city's population plus the population of contiguous, thickly populated places equals 50,000 or more. Additional contiguous counties are considered part of an MSA if they are economically and socially integrated with the central city.

Nonmetropolitan counties include all counties not in an MSA.

Poverty Rates

The rural poor population as referred to throughout the report is comprised of nonmetropolitan residents living below the Census Bureau's poverty line definition. The poverty line is based on an analysis of the percent of income devoted to food expenditures and is designed to identify a minimum level of income adequacy. It takes into account such factors as family size, sex of the family head, number of children under 18 years old and is adjusted annualy. In 1986 the poverty threshold for a family of four before tax was an income of $11,203.

NUTRITIONAL PROBLEMS OF THE RURAL POOR

Although it is commonly believed that the rural poor are less likely to be at nutritional risk than other low-income populations, a brief review of the available literature (which is sparse) combined with the analysis of nutritional data available from various federal sources, reveals a very different picture.

Critical Nutritional Findings of Analyses and Surveys

Taking a new and comprehensive look at already existing health and nutrition data bases managed by the Department of Agriculture

and nutrition data bases managed by the Department of Agriculture and the Department of Health and Human Services, and upon analyses of state data sources, Public Voice's initial study demonstrated that:

--A large proportion of the rural poor consume diets that are grossly inadequate in vitamins A and C, iron, and calcium[1].

--The rural poor, and especially rural poor children experience extremely high rates of biochemical nutrient deficiencies.

--Nearly 50% of poor, rural children examined had deficient blood levels of vitamin A--compared to significantly lower rates among non-rural poor children. Abnormally low blood levels of Vitamin C, zinc, and iron were found to be 40% to over 100% more prevalent among the rural poor than the general population[2].

--Growth stunting among rural poor children (an indicator of chronic undernutrition) occurs nearly three times as frequently as among non-poor children nationwide[3].

--Infant mortality and low birthweight rates in rural poor counties are considerably higher than national rates, and they have risen significantly in recent years. By 1983 rates were more than 50% higher in rural poor counties than in the rest of the nation. And the gap was increasing[4].

--The rural poor are grossly underserved by the so-called safety net of assistance programs, including: food stamps, school lunch, AFDC, medicaid, summer feeding, general assistance, and supplemental security income.

--The numbers of rural poor who do not receive benefits from these programs have risen significantly each year since 1979. For food stamps alone, the number unserved increased from less than 5.7 million people in 1979 to over 7.5 million by 1983--a 32% increase[5].

The Causes

Several critical factors that impact directly on these conditions among the rural poor are apparent. The first and most limiting is poverty--which by its very definition denotes the inability to purchase all one's basic necessities, including adequate levels of food. However, add to the difficulties of poverty the rigors posed by rural poverty, such as chronic parasite infestation among children and poor health care, and the likelihood of obtaining adequate nutrition and maintaining optimal nutritional status becomes even more remote.

Field Observations of Nutritional Problems

Site visits carried out by the author to poor rural households in several of the nation's most deeply impoverished regions (the

coal region of Appalachia, the Northern Mississippi Delta, Georgia's Cotton Belt, The Navajo Reservation, Native American Pueblos in New Mexico and Arizona, remote Hispanic areas of Northern New Mexico and a number of economically devastated farmbelt communities in Kansas) revealed a number of additional "rural factors" that interfere with nutritional status. These factors include:

--Lack of refrigeration in the homes of many rural poor.
A disproportionately large percent of the rural population do not have refrigerators in their homes. Rather, in many rural regions of the country, the poor often have only a "deep-freeze" for food storage. As a result, these households generally limit the amounts of perishables they purchase due to likelihood of spoilage.

--Unmet health care needs that impact on nutritional status
The recent decline in the number of small rural hospitals operating in rural areas and the reluctance of health professionals to establish practices in remote areas has severely affected impoverished rural areas. Nutrition-related illnesses are more likely to go unchecked, and less acute nutrition-linked problems, such as chronic intestinal parasite infestation among children, a significant problem in rural areas and particularly common in the Deep South and Appalachia, often go unchecked for months, greatly affecting childrens' nutritional status.

--Disproportionate underutilization of food and health assistance programs. As previously mentioned, the rural poor, due to several program barriers, are disproportionately underserved by the food, health and income assistance programs available to the needy.

--The difficulties faced in accessing reasonably priced and good quality food. Our observations and discussions with rural poor families indicated that the distances which must often be travelled to reach a reasonably priced market and the poor selection of fresh produce and other food items often available in such markets also pose a severe obstacle to adequate access to food. Many of those we spoke with told us that in order to save time and gasoline costs, they often shop at local, all-purpose markets, where they are often given credit but are charged a high markup on their purchases. In addition, rarely is it economically viable for these stores to carry fresh produce, due to slow turnover, poor refrigeration, and irregular demand. Therefore, a large proportion of the rural poor are limited in their consumption of these foods to the week or so following their monthly visit to a more distant supermarket where selection and prices are more desirable.

For many impoverished rural residents who do not own their own vehicle, transportation to and from the closest supermarket often involves paying a neighbor or friend $5-$15 per trip--directly

limiting the resources remaining for food purchases.

Perhaps the most critical nutritional finding of these site visits was the infrequent consumption of fruits and vegetables among this population. Therefore, we chose to examine this component of their diets in greater detail.

Inadequate Intake of Fruit and Vegetables Among Rural Poor

These site visits revealed that extremely infrequent consumption of fruits and vegetables, either canned or fresh, is the norm among the rural poor. Of the dozens of homes visited, the absence of fruits, vegetables or fruit juices was especially noticeable. With the exception of a handful of homes in which potatoes were available, produce of any type was not to be found--even canned or frozen produce was rare. In the majority of homes visited, over-diluted Tang or Kool-Aid replaced orange juice as the morning's staple beverage.[6]

The importance of fruits and vegetables in a healthy diet has received increasing appreciation in recent years. Not only are they major contributors of essential nutrients such as vitamins A and C, folic acid, fiber and several trace minerals, but more recently, their role in cancer prevention has received a great deal of recognition and attention[7]. In addition, the critical role vitamin C plays in increasing the absorption of iron is another important factor[8].

Given the less frequent intake of vitamin C by this population, a higher prevalence of iron-deficiency anemia is another likely outcome. Furthermore, given the presence of intestinal parasites which have been noted to be common among poor rural children[9], and the significant decrease in absorption of iron (as well as other nutrients) caused by intestinal parasites[10], it is likely that increased prevalence of iron-deficiency anemia will be found among this population--especially its children. (This hypothesis is corroborated by the findings of our analyses.)

Family Gardens Do Not Solve Problems

Despite public perceptions to the contrary, numerous obstacles prevent or decrease the likelihood that a family garden will be a worthwhile use of time or resources for these families. First, compared to the general population, a disproportionately large number of rural poor are elderly[11]. Second, the rural poor are far more likely to be plagued by physically handicapping conditions than even the urban poor[12]. Third, a large proportion of those who are young and healthy enough to raise a garden do not own their property or live in small village with little land on which to garden. In addition, raising a productive garden requires substantial cash inputs for seed, fertilizer, insecticides, etc. With already stretched resources many poor families are reluctant to risk their limited financial resources on a somewhat risky venture such as a garden.

Many rural families have found gardening and preserving to be extremely beneficial toward ensuring a superior diet for their families. However, our observations found that generally such families invest significant levels of resources, in terms of both labor and start up costs to their gardens.

Corroborating these field observations, a review of the literature generated primarily from examinations of food consumption data from the second National Health and Nutrition Examination Survey (NHANES II) and the Nationwide Food Consumption Survey (NFCS), as well as from a number of smaller food consumption surveys, pointed to an urbanization-associated bias with regard to consumption of fruits and vegetables[13,14,15,16]. In fact, the literature consistently supported our findings that <u>inadequacy of fruit and vegetable consumption among the rural poor is the most distinguishing dietary characteristic between the rural poor and the more urbanized impoverished population.</u>

STRUCTURE OF THE REPORT

The report is divided into two primary sections: (I) An analysis of the nutritional status of the rural poor, and (II) An examination of the effectiveness and problems of selected food assistance programs in rural areas.

I.The first section of this report presents results of several first-of-their-kind analyses of data on the nutritional status of America's rural poor from both the NHANES II survey of the Department of Health and Human Services and the more current Continuing Survey of Food Intakes of Individuals (CFSII) of the United States Department of Agriculture.

Section I is divided into three primary subsections:

A) an analysis of NHANES II dietary intake data for frequency of consumption of fruits and vegetables.

B) a more extensive analysis of NHANES II data including analysis of biochemical and nutrient intake level data, and frequency of consumption of related food groups.

C) analysis of recent (1985) dietary intake data from USDA's CSFII. Data are analyzed for frequency of consumption of selected fruit and vegetable groups.

Part C was included to provide the most current assessment of the diets of the rural poor available to date.

II. The chapters included in the second section of this report highlight our findings on barriers to participation by the rural poor in four key food assistance programs; Food Stamps, Summer Feeding, Emergency Food (food banks) and the Temporary Emergency Food Assistance Program. Included in these chapters are the results of a number of surveys, literature reviews and data analyses identifying gaps in program coverage in rural areas and examining the causes of the problems faced by the rural poor in accessing these programs. Summaries and general findings from these program reports are included in the program section.

KEY FINDINGS

SECTION I--FOOD CONSUMPTION ANALYSES

Our examination of food consumption found that:

--impoverished rural residents experience a wide range of nutritional problems at rates that are considerably higher than those of individuals with higher incomes and that are often higher than those of the urban poor.

--fruits and vegetables rich in vitamins A and C such as citrus fruits and juices, deep yellow and dark green vegetables are inadequately consumed by this population. For the vitamin C group, the rural poor are far more likely than the urban poor to consume extremely limited amounts in their diets.

--the disproportionate effect of poverty on the nutritional intake of the rural population was greatest among children, especially the youngest group (2-5 years). Almost three times as many poor rural as poor urban children consume vitamin C-rich fruits or vegetables less than once a week. Poor rural children were also found to be less than half as likely to eat vitamin A-rich fruits or vegetables on a regular basis (at least three times per week) as were poor urban children.

--this negative rural effect upon nutritional adequacy was greater among females than ma , especially for vitamins A and C and Calcium.

--while poor rural residents were consistently less likely to consume total fruits or vegetables or vitamin C-rich fruits and vegetables, the "negative poverty effect" was less consistent for vitamin A-rich fruits and vegetables.

--in rural areas, the negative effect of poverty on consumption of these dietary components is greatest among poor minority residents.

--to a lesser extent, inadequate intakes of calcium and iron were also found to be more common among the rural poor, however the urbanization effect was less consistent for these nutrients.

SECTION II--FOOD PROGRAM ANALYSES

The Summer Food Service Program for Children

--Our analysis of rural participation in the summer food service program found that:

--in the states included in our survey, only **9.6%** of America's poor children were served by the summer feeding program. However, **11.8%** of the metropolitan poor were served by the program but only **5%** of the nonmetropolitan poor children participated.

--The most critical barriers to participation by rural children in the summer feeding program were: 1) Exclusion of private nonprofit sponsors from the program; 2) Lack of outreach funding; 3) Insufficient reimbursement rates for rural areas and 4) Overly stringent eligibility rules.

The Food Stamp Program

--Although millions of needy Americans receive food stamp benefits, millions more are eligible but do not receive food stamps. The rural poor are a particularly underserved population.

--Among the rural poor, the major barriers to food stamp participation are: 1) Physical Access Barriers; 2) Asset Restrictions; 3) Administrative Barriers; 4) Stigma/Attitudinal Barriers; 5) Informational Barriers/Outreach; 6) Barriers Unique to the Elderly and 7) Food Stamp/Public Assistance Programs Link

The Temporary Food Assistance Program (TEFAP)

--Approximately 5 million households or 15 million persons received TEFAP commodities in October 1986 according to a study by the Food and Nutrition Service (FNS).

--Approximately half of the TEFAP distribution sites were located in non-urban areas and 55% of all households that received commodities from the program were served at non-urban sites.

--Our survey of a representative sample of TEFAP directors found that the rural poor and near-poor depend heavily on TEFAP, often as their sole source of food assistance.

--We found that any negative stigma associated with TEFAP among the rural population appears to be much less than with other assistance programs such as food stamps.

Emergency Feeding Programs--Food Banks

Our survey of the 82 certified Second Harvest food banks found that:

--the most critical barriers to emergency food distribution in rural areas were 1) transportation costs; 2) excessive distances; 3) lack of vehicles for transport and 4) lack of storage facilities.

DEMOGRAPHIC CHARACTERISTICS OF THE RURAL POOR

RECENT INCREASES IN RURAL POVERTY

The present study comes at a time when America's rural economy is in the midst of the most severe crisis since the Great Depression. Unlike the nation's urban areas, which overall have experienced a modest decline in poverty rates during the past three years, rural areas have been passed over by this "economic recovery"[17]. According to the most recent data available from the Census Bureau, there were over 9.7 million poor persons living in nonmetropolitan areas throughout the United States in 1985. Subsequently, for the first time in several decades, the 1986 rate of poverty in the nation's nonmetropolitan areas surpassed that in the country's large cities. Furthermore, the 1986 nonmetropolitan poverty rate of 18.1 percent was nearly 50 percent above the rate in the nation's metropolitan areas.

Table I and figure IA display these trends.

Table I
Poverty Rates in Metro, Nonmetro and Central Cities (1979-1986)

(percentages)	1979	1980	1981	1982	1983	1984	1985	1986
Central City	15.7	17.2	18.0	19.9	19.8	N/A	19.0	18.0
Metropolitan	10.7	11.9	12.6	13.7	13.8	N/A	12.7	12.3
Nonmetropolitan	13.8	15.7	17.0	17.8	18.3	N/A	18.3	18.1

Source: U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Series P-60.

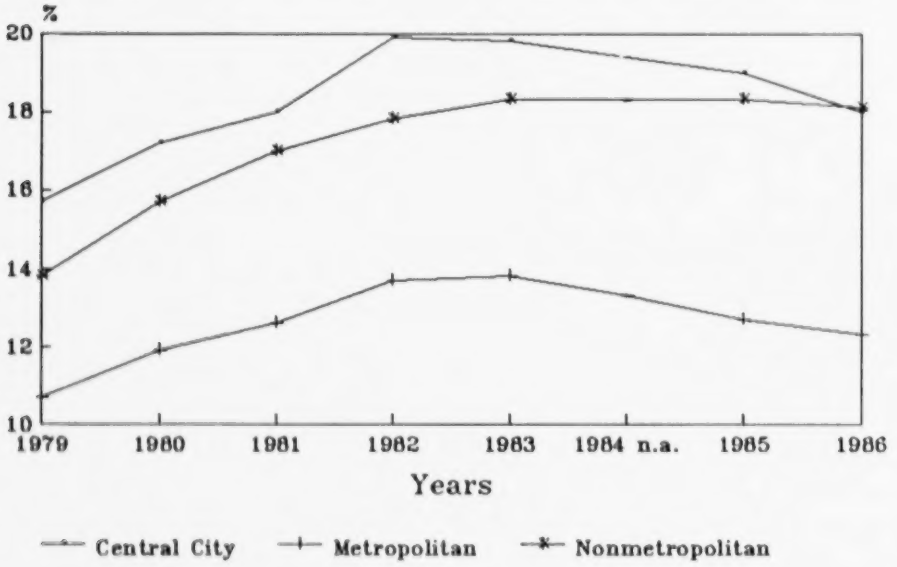
Although poverty rates nationally and in urban areas decreased between 1983 and 1986, the rate in nonmetropolitan areas remained relatively stable--declining from 18.3% to the current 18.1%. Comparable rates in metropolitan areas declined from an already lower 13.8%, to 12.9% during that period. (Poverty rates are used here rather than numbers as the changes in the metropolitan/nonmetropolitan definitions instituted in 1984 make numeric comparisons over time difficult to interpret).

Equally significant, between 1979 and 1983, the rate of poverty in the nation's nonmetropolitan areas increased by almost a third, representing the addition of 3.6 million rural residents into poverty.

POPULATION PROFILE

A closer examination of this significant but largely invisible population highlights a number of characteristics which distinguish the rural poor from other impoverished subpopulations. First, it is critical to dispel the commonly held belief that they are mostly farmers. In fact, only between six and eight percent of

Fig. 1A: Poverty Rates by Urbanization



Source: Census Bureau
(1984 data not available)

the rural poor farm or live on farms. Rather, they are employed by a wide range of rural-based industries, including manufacturing, mining, service industries, other agriculture-related industries, as well as farming.

Single-Parent Households

Particularly significant, the rural poor are nearly twice as likely as their urban counterparts to live in two-parent households. Whereas 45.2% of our nation's inner city poor live in female-headed households, the comparable rate among the rural poor is only 25.7%[18]. This greater tendency to establish and remain in two parent households results in serious obstacles to their participation in the nation's principal health and welfare programs. In most states with large rural populations, only single parent households are eligible to participate in the AFDC or Medicaid programs. This requirement results in the categorical ineligibility and therefore disproportionate exclusion of the rural poor from these key programs.

Age Composition

Another characteristic distinguishing the rural poor from their urban counterparts is the significantly higher proportion of elderly and lower proportion of minorities who comprise the population. In nonmetropolitan counties the elderly comprise 12.4% of the impoverished population, relative to 8.4% in central

cities. In many rural counties the elderly poor comprise a still higher proportion of the population[19].

Racial Composition

While the rural poor consist of several ethnically diverse subpopulations, including Whites, Blacks, Mexican Americans, and Native Americans, a racial comparison to the urban poor indicates that minorities comprise a smaller proportion of the population. While Blacks comprise more than 40% of the central city poor, only about 21.3% of the nonmetropolitan poor are Black. Whites comprise 75.1% of the nonmetropolitan poor population, but account for only 52.3% of the central city poor population[20]. It is also significant that nearly 85% of poor nonmetropolitan Blacks reside within the Census Bureau's "Southern" region.

Education

The level of educational attainment of the rural poor is also significantly different than that of our nation's urban poor. More than two out of every five rural poor persons over the age of 25 have not completed high school according to 1980 census data. This is considerably higher than the percent among poor metropolitan or central city residents. In addition, only 11.2% of the rural poor compared to 17.9% of the poor living in the nation's central cities have completed four years of college[21].

Geographic Concentration

Geographically, the rural poor are dispersed throughout the country, although they are most concentrated in a limited number of regions, including the "Deep South", Appalachia, much of the Ozark Region, the Rio Grande Valley of Texas, the Southwest including the predominately Hispanic and Native American regions, and the Reservation Lands of the Dakotas. In addition, the recent farm crisis has created a pocket of new poor throughout the Midwestern farmbelt region[22].

While rural poverty is most concentrated in these areas, large numbers of rural poor also live in states as diverse geographically as Alaska, California, Maine, Michigan, and Pennsylvania[23].

Section I

Food Consumption Analyses

Chapter II
Analysis of NHANES II—Part I

INTRODUCTION

In this section of the report, findings from two distinct analyses of data from NHANES II (the second National Health and Nutrition Examination Survey) (1976-1980) are presented. A description of the NHANES II survey is provided in Appendix A.

In this chapter, findings from an examination of NHANES II dietary intake data of key groups of fruits and vegetables are presented. (In Chapter III, a more extensive examination of dietary intake data and other nutritional status indicators are presented.)

METHODS

For analysis of NHANES II data, the rural poor were defined as individuals in nonmetropolitan areas who lived in households with income below the poverty threshold. Since NHANES II was conducted in 1976-80, the 1979 poverty threshold was used ($7,412 per year before taxes for a family of four). Income relative to the poverty threshold was estimated from the Poverty Income Ratio (PIR), a variable that is calculated by the National Center for Health Statistics (NCHS) and included on the NHANES II data tapes ([24]). For example, Poverty Income Ratio (PIR) = 1 for families with in comes at the poverty threshold, 2 for families with incomes twice the poverty threshold, through PIR=9.98 for families with incomes greater than or equal to 9.98 times the poverty threshold. The PIR adjusts automatically for differences in the poverty threshold for families of different sizes and for differences in income characteristics of farm and nonfarm families. However, resources from federal assistance programs such as Aid to Families with Dependent Children or Food Stamps are not included in the calculation of family income. Thus, the PIR may not reflect the true purchasing power of very low income families who participate in income transfer programs compared, for example, to low income "working poor families" who may be above eligibility thresholds for such programs.

Analysis of Fruit and Vegetable Consumption by Six Age Groups

This analysis includes an examination of consumption levels of vitamin A-rich fruits and vegetables, vitamin C rich fruits and vegetables, and total fruits and vegetables. (Refer to table 2A)[25].

Table 2A: Contributions of Food Groups to Intakes of Vitamins A and C, Calcium and Iron*

FOOD GROUP	% CONTRIBUTION TO			
	Vit A	Vit C	Calcium	Iron
Milk, Cheese, etc.	11.7	2.3	58.6	1.7
Meats	1.3	2.1	2.0	23.2
Poultry	0.5	-	-	2.3
Organ Meats	12.5	0.5	-	1.3
Fish, Shellfish	-	-	1.0	2.3
Eggs	6.0	-	2.4	4.2
Soups, Gravies, Sauces	5.3	1.0	1.1	1.3
Fats & Oils	4.5	-	-	-
Legumes & Nuts	-	0.8	1.3	3.7
Cereals	5.5	3.0	1.7	9.4
Grains, Grain Products	0.4	0.7	10.9	14.5
Fruits, Vegetables	38.0	73.9	5.9	10.1
Sugar, Sugar Products	0.9	8.2	1.0	-
Desserts and Sweets	1.4	-	2.4	4.0
Mixed Protein Dishes	5.8	3.0	3.5	6.6
Alcoholic Beverages	-	-	1.3	-
Sugar Free Bevs., Coffee, Tea	-	-	1.4	4.1
Salty Snacks	-	0.4	0.3	0.8
TOTAL	94%	95%	95%	90%

*Based on Block et al, Am J Epidemiol 1985; 122:13-26.

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25).

The sample was divided into the following subgroups for analysis;Rural and Urban Poor, Near Poor (a PIR of 1.0-1.99), and Non-Poor(a PIR equal to or greater than 2), each by six age categories (2-5 years of age, 6-11, 12-19, 20-44, 45-64 and 65-74).In order for sample sizes to be sufficient, sex and racial groups were combined throughout this set of analyses.

To standardize and simplify interpretation of the observed disparities in consumption, relative risks between the groups were calculated. These calculations compare the relative risk of adequate or inadequate consumption (as defined by the specific analysis) between the rural poor and the nonpoor groups within each age segment, as well as between the rural and urban poor within each age group. Relative risks (RR) of dietary inadequacies associated with poverty or rural residence were calculated as follows:

RR= percentage of poor or rural poor with specified value (either low or high)
percentage of nonpoor or urban poor with specified value

A relative risk of 1.0 indicates no excess of dietary inadequacies among the rural poor; a relative risk greater than 1.0 indicates higher risk. While a relative risk less than 1.0 indicates lower risk. For example, a relative risk of 1.2 indicates a 20% excess risk among the rural poor; a relative risk of 2.0 indicates a 100% excess risk; etc.

When the relative risk of consumption on a "frequent basis" is calculated, a higher RR implies relative protection among the group with the higher intake. (A detailed explanation of the relative risk calculation and of confidence intervals for relative risks are presented in Appendix B).

Unless otherwise specified, estimates of proportions or means are based on weighted data.

RESULTS

These data are presented in Tables 2B-2G. The tables are followed by a number of key findings from these data. Graphs are provided for each group of analyses.

1) TOTAL FRUIT AND VEGETABLE CONSUMPTION

I. Comparison by Income Group:

Table 2B and Figure 2A present data from an age-specific comparison of the prevalence of less-than-daily consumption of fruits and vegetables among the rural poor, the rural near poor and the rural nonpoor. Relative risks are also given.

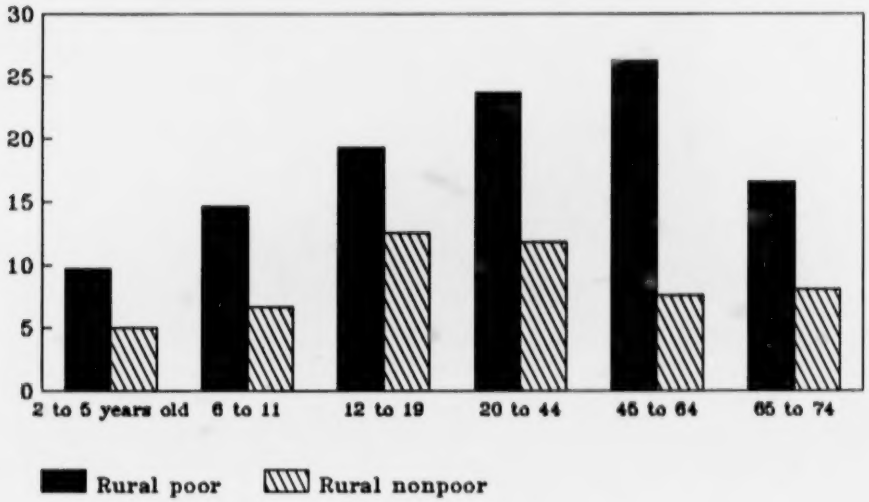
These data reveal the following patterns:
-- A strong dose-response relationship between declining income and increased likelihood of less-than-daily consumption of fruits

Table 2B: Frequency of Consumption of All Fruits and Vegetables by Income (in Rural Areas)

	LESS-THAN-DAILY INTAKES			
Age	Poor	Near Poor	Nonpoor	Rel. Risk*
2 to 5 years	9.7	7.7	5.0	1.9
6 to 11	14.6	5.8	6.7	2.2
12 to 20	19.3	16.1	12.5	1.5
20 to 45	23.7	16.8	11.8	2.0
45 to 64	26.3	14.9	7.6	3.5
65 to 74	16.6	14.5	8.0	2.1

* Relative Risk (poor/nonpoor)

Fig. 2A: Percent with Less-Than Daily Intake of All Fruits and Vegetables by Income (in Rural Areas)



or vegetables. This means that the lower the income, the less likely it is that rural residents consume fruits or vegetables on a daily basis.

-- The strongest negative association between income and less-than-daily consumption exists among the 45-64 year olds.

-- In four of the six age groups examined, poor rural residents were more than twice as likely as their nonpoor neighbors to consume a fruit or a vegetable less than once a day. Between the ages of 45 and 64, they were more than three times as likely (26.3% vs 8.0%).

-- Relative to nonpoor rural residents, the rural poor were between 150% and 350% more likely to consume fruits and vegetables less than once a day.

II. Comparison by Urbanization:
Table 2C and Figure 2B present data from a similar comparison of the percentage of urban poor and rural poor who reported less-than-daily consumption of fruits or vegetables. Relative risks between the two groups were determined in the same manner described above.

Table 2C: Frequency of Consumption of All Fruits and Vegetables by Urbanization

	LESS-THAN-DAILY INTAKES		
Age	Rural Poor	Urban Poor	Rel. Risk*
2 to 5 years	9.7	9.4	1.0
6 to 11	14.6	12.5	1.2
12 to 20	19.3	21.2	0.9
20 to 45	23.7	23.3	1.0
45 to 64	26.3	25.2	1.0
65 to 74	16.6	25.2	0.7

* Relative Risk (rural poor/urban poor)

These analyses revealed the following patterns:

-- With the exception of the eldest group among the rural poor, the likelihood of less-than-daily consumption increases consistently with age.

-- No consistent disparities exist between the urban and the rural poor with regard to frequency of consumption of total fruits and vegetables.

Fig. 2B: Percent with Less-than-Daily Intake of All Fruits and Vegetables by Urbanization

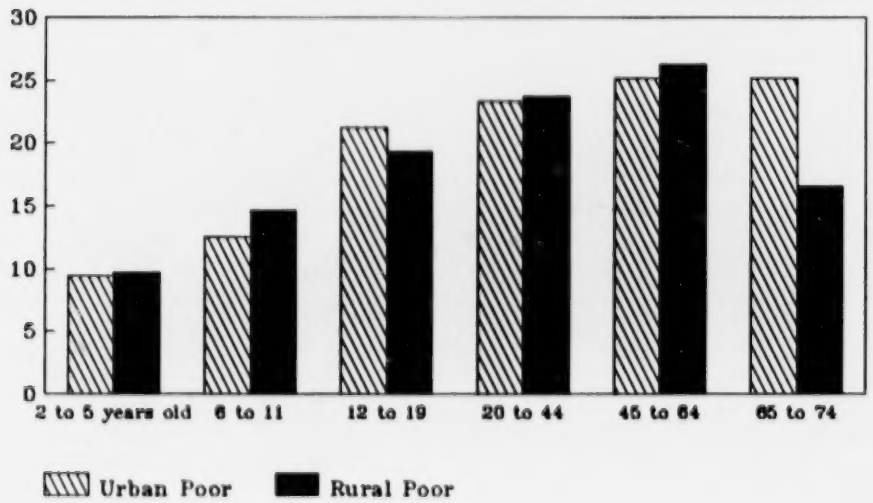


Table 2D: Frequency of Consumption of Fruit and Vegetables Rich in Vitamin C by Income (in Rural Areas)

	LESS-THAN-WEEKLY INTAKES				DAILY-OR-MORE INTAKES			
Age	Poor	Near Poor	Nonpoor	Rel. Risk*	Poor	Near Poor	Nonpoor	Rel. Risk*
2 to 5 years	26.6	18.3	11.7	2.3	27.2	23.0	37.8	0.7
6 to 11	23.0	17.4	14.7	1.6	23.4	26.2	32.0	0.7
12 to 20	33.5	27.7	22.8	1.5	24.3	23.2	29.9	0.8
20 to 45	30.0	29.6	19.6	1.5	22.8	27.3	31.0	0.7
45 to 64	36.3	30.2	16.9	2.1	26.2	29.5	43.0	0.6
65 to 74	35.1	24.6	14.9	2.4	36.2	39.2	50.5	0.7

* Relative Risk (poor/nonpoor)

2) VITAMIN C-RICH FRUIT AND VEGETABLE CONSUMPTION
(includes; avocado, cantaloupe, grapefruit, lemon, lime, orange, strawberries, brussel sprouts, broccoli, cauliflower, green pepper, tomato; cooked greens, such as collards, kale, mustard or turnip)

I. **Comparison by Income Group:**

Table 2D and Figures 2C and 2D present data from a comparison of the prevalence of less-than-weekly and at-least-daily consumption of vitamin C-rich fruits and vegetables among the rural poor, the rural near poor and the rural nonpoor, by six age groups.
These data revealed:

Fig. 2C: Percent with Less-than-Weekly Intake of Fruit and Vegetables Rich in Vitamin C by Income (in Rural Areas)

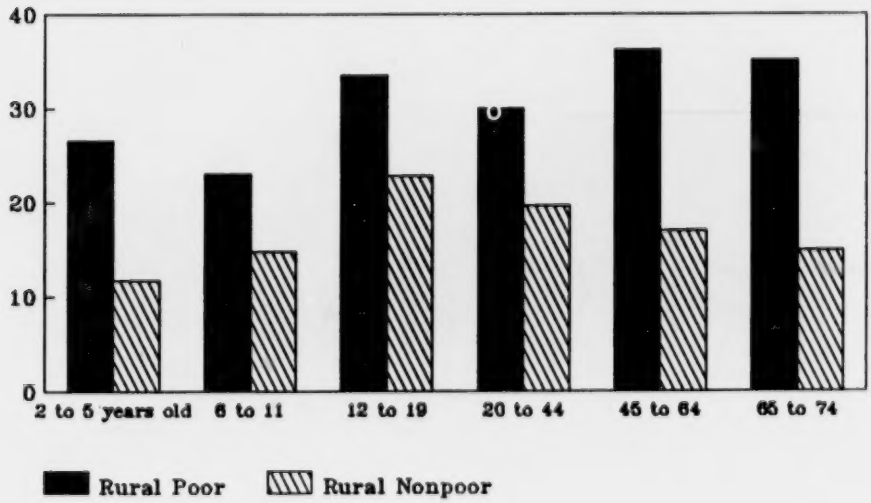
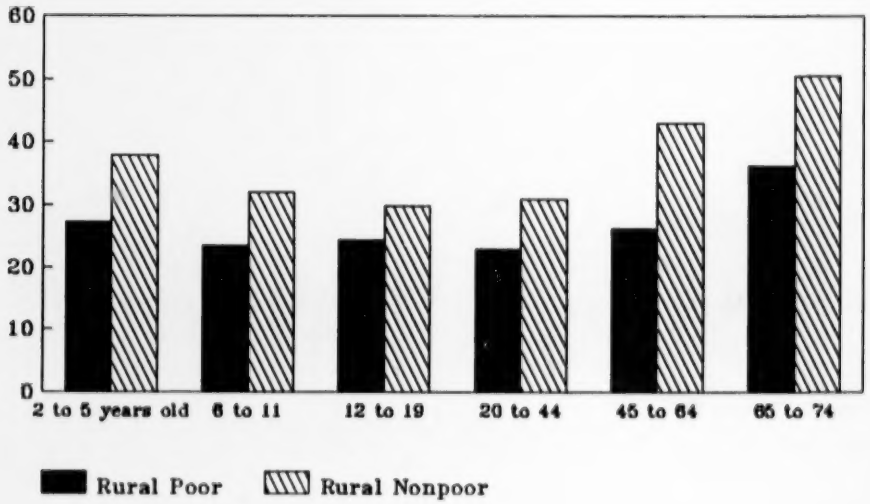


Fig. 2D: Percent with Daily-or-More Intake of Fruit and Vegetables Rich in Vitamin C by Income (in Rural Areas)



Less-than-Weekly Consumption:

--A consistent and strong relationship between income and consumption of this group of fruits and vegetables among the rural population. The percent of the rural population who consume these foods on a weekly basis declines sharply as income declines.

--A relative risk of those below the poverty threshold compared to those above twice the poverty threshold ranges from a low of 1.5 to a high of 2.4 with regard to the proportion who consume these foods less than once each week. The near poor group were consistently between these two extremes.

--The highest relative risks occurred among the youngest children and the two oldest groups. Among these age groups the rural poor were between 2.1 and 2.4 times more likely than their non-poor neighbors to consume these foods less often than once a week.

At-Least-Daily Consumption:

--A striking pattern of less frequent consumption of these fruits and vegetables among the rural poor than among the rural nonpoor for all age groups.

-- Rather than a dose-response pattern, the gap between the near poor and poor is inconsistent and small--indicating the existence of an income threshold significantly above the poverty line which must be reached before consumption of this group of fruits and

Table 2E: Frequency of Consumption of Fruit and Vegetables Rich in Vitamin C by Urbanization

	LESS-THAN-WEEKLY INTAKES			DAILY-OR-MORE INTAKES		
Age	Urban Poor	Rural Poor	Rel. Risk*	Urban Poor	Rural Poor	Rel. Risk*
2 to 5 years	9.1	26.6	2.9	35.7	27.2	0.8
6 to 11	16.8	23.0	1.4	31.7	23.4	0.7
12 to 20	23.6	33.5	1.4	31.3	24.3	0.8
20 to 45	19.6	30.0	1.5	32.5	22.8	0.7
45 to 64	26.6	36.3	1.4	38.5	26.2	0.7
65 to 74	32.9	35.1	1.1	34.8	36.2	1.0

* Relative Risk (rural poor/urban poor)

vegetables on at least a daily basis is achieved by rural residents.

II. <u>Comparison by Urbanization:</u>
Table 2E and Figures 2E and 2F present data from a comparison of the percentage of urban poor and rural poor who reported less-than-weekly as well as those who reported at-least-daily consumption of vitamin C-rich fruit or vegetable.

These data reveal:
<u>Less-than-Weekly Consumption:</u>
-- A very strong and consistent rural/urban disparity in consumption is observed. For the entire age spectrum, the rural

Fig. 2E: Percent with Less-than-Weekly Intake of Fruit and Vegetables Rich in Vitamin C by Urbanization

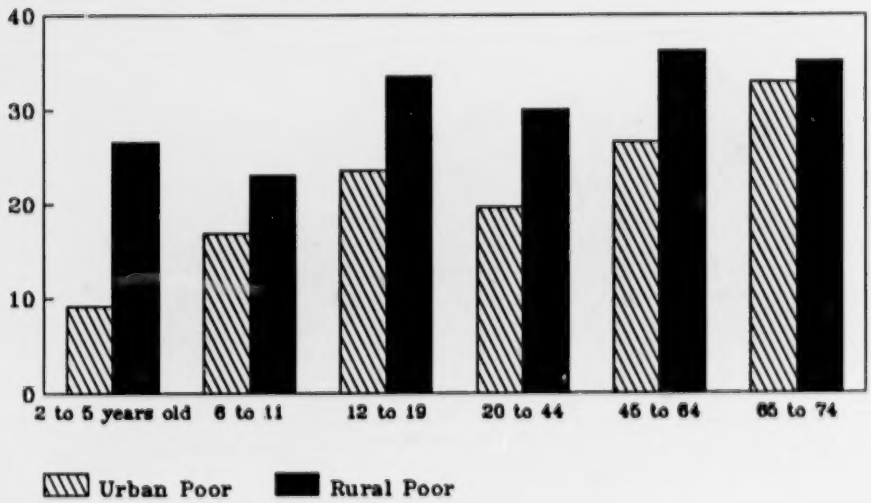
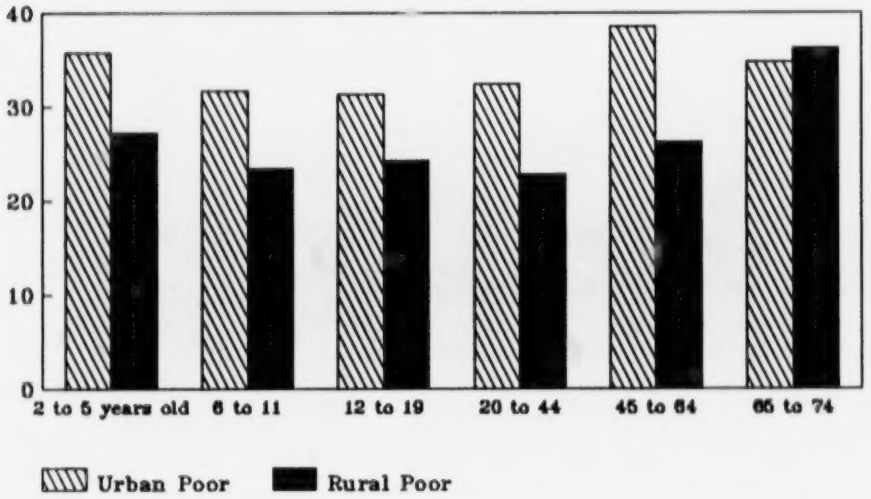


Fig. 2F: Percent with Daily-or-More Intake of Fruit and Vegetables Rich in Vitamin C by Urbanization



poor were considerably less likely to consume a vitamin C-rich fruits or vegetables on a weekly basis than their urban counterparts.

-- The disparities were greatest among the youngest group (2-5 years old). Rural poor children of this age were almost three times as likely to consume vitamin C-rich fruits and vegetables less than once a week than poor urban children. For other age groups, the increased likelihood of less-than-weekly consumption among the rural poor ranged from 10% to 50%.

-- Though the urban/rural disparities were less significant among the eldest groups, these groups reported the highest frequency of less-than-weekly consumption among the urban poor and the second highest among the rural poor.

<u>At-Least-Daily Consumption:</u>

-- Across the age spectrum the rural poor were also considerably less likely to consume vitamin C rich fruits or vegetables on an at-least-daily basis than the urban poor.

-- With the exception of the eldest group, the rural/urban disparities were large--generally in the range of one-third to 75%.

Table 2F: Frequency of Consumption of Fruit and Vegetables Rich in Vitamin A by Income (in Rural Areas)

	LESS-THAN-WEEKLY INTAKES				THREE-OR-MORE-TIMES-A-WEEK INTAKES			
Age	Poor	Near Poor	Nonpoor	Rel. Risk*	Poor	Near Poor	Nonpoor	Rel. Risk*
2 to 5 years	46.1	47.6	43.1	1.1	13.3	17.4	19.0	0.7
6 to 11	43.3	48.0	40.4	1.1	16.1	14.9	17.2	0.9
12 to 20	58.1	53.7	49.7	1.2	10.3	10.7	14.3	0.7
20 to 45	50.9	43.7	43.5	1.2	16.3	16.6	20.2	0.8
45 to 64	43.7	37.3	35.8	1.2	22.0	22.2	22.5	1.0
65 to 74	42.3	34.5	32.0	1.3	21.6	28.2	22.7	1.0

* Relative Risk (poor/nonpoor)

3) VITAMIN A-RICH FRUIT AND VEGETABLE CONSUMPTION

(Includes: cantaloupe, mango, apricots, papaya, peaches, watermelons; carrots; greens such as collards, kale, mustard, or turnip; pumpkin, spinach, sweet potato, winter squash; broccoli.)

I. Comparison by Income Group:

Table 2F and Figures 2G and 2H present data from an age-specific comparison of the prevalence of less-than-weekly consumption and the prevalence of consumption three-or-more-times-a-week of vitamin A-rich fruits and vegetables between the rural poor, the rural near poor and the rural nonpoor.

Fig. 2G: Percent with Less-than-Weekly Intake of Fruit and Vegetables Rich in Vitamin A by Income (in Rural Areas)

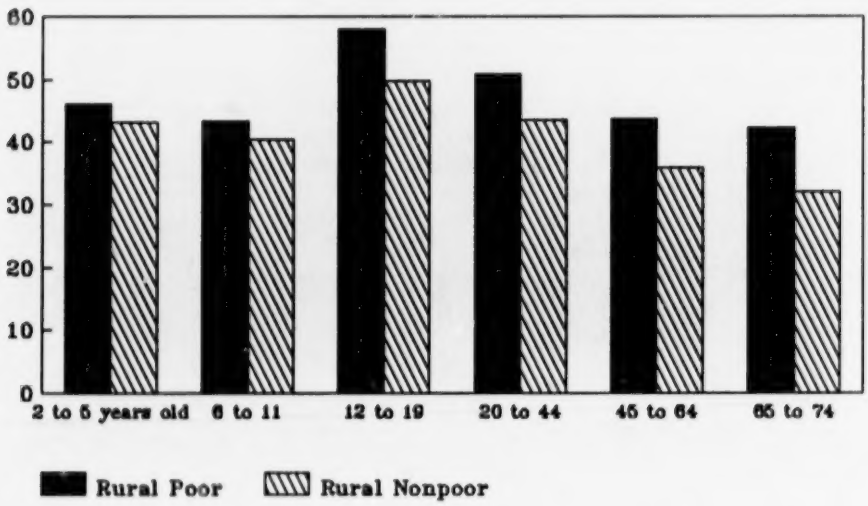
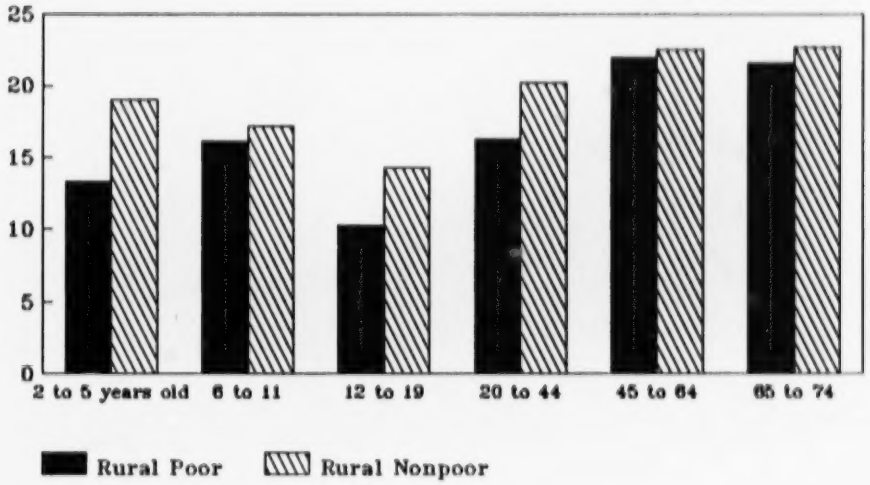


Fig. 2H: Percent with 3-or-More-Times-a-Week Intake of Fruit and Vegetables Rich in Vitamin A by Income (in Rural Areas)



These data reveal:

Less-than-Weekly Consumption:

-- The rural poor were consistently less likely to consume these foods at least once a week than rural residents with higher incomes. This income-related trend existed among each age group examined.

-- Teens were the age group least likely to consume these foods at least weekly.

Three-or-More-Times-a-Week Consumption:

-- A consistent relationship between income and consumption of this group of fruits and vegetables among the rural population is observed: as income declines, the percentage of the population consuming these foods on a frequent basis (three or more times a week) generally declines.

-- This income-related trend is greatest among preschool children and teens.

II. Comparison by Urbanization

Table 2G and Figures 2I and 2J present data from a comparison of the percentage of urban poor and rural poor who reported less-than-weekly consumption as well as those who reported three-or-more-times-a-week consumption of vitamin A-rich fruit or vegetables.

Table 2G: Frequency of Consumption of Fruit and Vegetables Rich in Vitamin A by Urbanization

	LESS-THAN-WEEKLY INTAKES			THREE-OR-MORE-TIMES-A-WEEK INTAKES		
Age	Urban Poor	Rural Poor	Rel. Risk*	Urban Poor	Rural Poor	Rel. Risk*
2 to 5 years	32.6	46.1	1.4	27.3	13.3	0.5
6 to 11	36.3	43.3	1.2	20.1	16.1	0.8
12 to 20	44.8	58.1	1.3	15.7	10.3	0.7
20 to 45	40.5	50.9	1.3	18.4	16.3	0.9
45 to 64	32.0	43.7	1.4	22.6	22.0	1.0
65 to 74	42.9	42.3	1.0	24.1	21.6	0.9

* Relative Risk (rural poor/urban poor)

These analyses revealed the following patterns:

Less-than-Weekly Consumption:
-- Relative to the urban poor, the rural poor were 20% to 40% more likely to consume foods of this group less than once a week than the urban poor. And again the gap was largest for the youngest group of children examined.

Fig. 2I: Percent with Less-than-Weekly Intake of Fruit and Vegetables Rich in Vitamin A by Urbanization

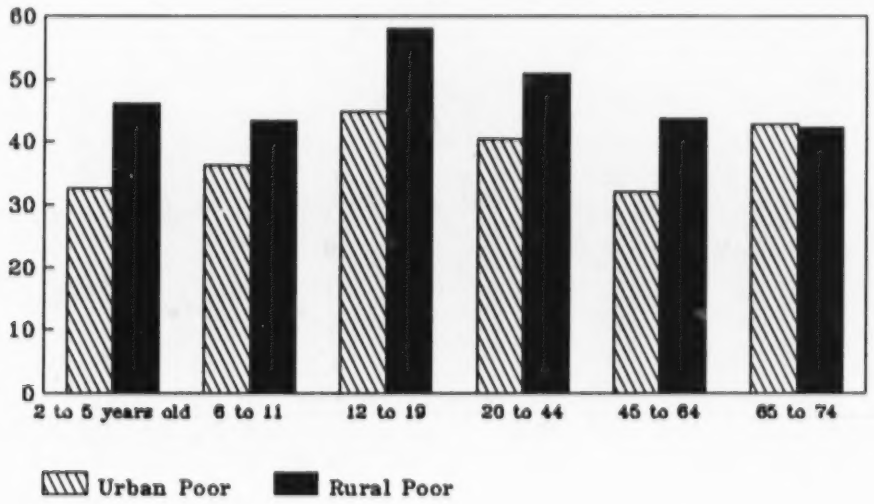
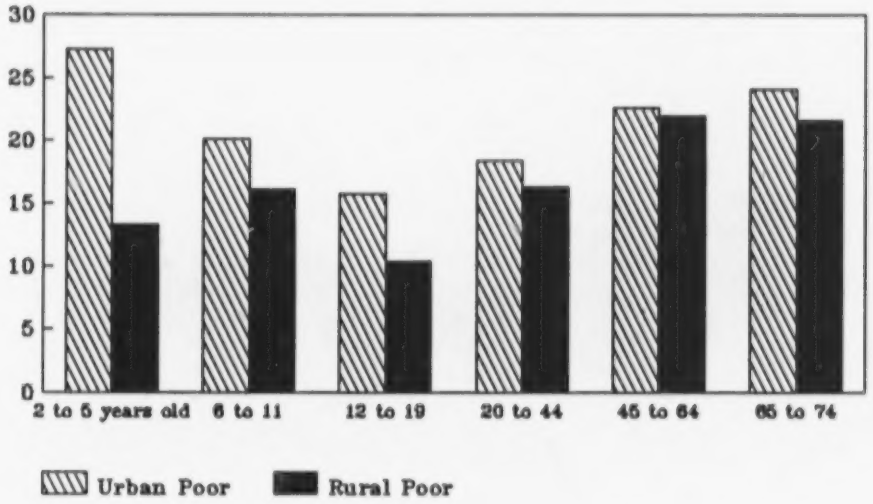


Fig. 2J: Percent with 3-or-More-Times-a-Week Intake of Fruit and Vegetables Rich in Vitamin A by Urbanization



B. Three-or-More-Times-a-Week Consumption:

-- A smaller proportion of the rural poor consumed these foods at least three times per week than did their urban counterparts.

-- The urban/rural disparity was concentrated among children and was greatest among the youngest group of children: 27.3% of the urban poor children 2-5 years and 13.3% of the rural poor children of the same age consumed foods of this group at least three times per week.

SUMMARY OF RESULTS

I. EFFECT OF POVERTY ON CONSUMPTION OF FRUITS AND VEGETABLES (AMONG RURAL RESIDENTS)

-- Among rural residents, poverty is consistently and disproportionately related to inadequate consumption of fruits and vegetables. The effect was observed across the age spectrum examined.

-- This income-related trend is largest with regard to consumption of vitamin-C rich fruits and vegetables. The poor were about half as likely to consume this group of fruits and vegetables on a regular basis (at least once each week) as the nonpoor.

-- Although a consistent income-related trend was observed for intake of vitamin A-rich fruits and vegetables, the magnitude of the effect was lower than that for vitamin C-rich fruits and vegetables.

-- Among the poor, a larger proportion of the elderly reported frequent consumption of Vitamin A and Vitamin C groups than among the other age segments (e.g., as age increased so did likelihood of consuming these food groups on a regular basis). However, the poor elderly consistently reported less frequent consumption than the nonpoor elderly.

II. EFFECT OF URBANIZATION LEVEL ON FREQUENCY OF FRUIT AND VEGETABLE CONSUMPTION

-- Overall the rural poor are significantly less likely to consume vitamin A and vitamin C-rich fruits and vegetables on a frequent basis than the urban poor. This disparity is greatest among children, especially the youngest group, and declines with increasing age. Among the youngest group of children the effect is extreme, with almost three times the proportion of poor rural versus poor urban children consuming vitamin-C rich fruits or vegetables less than once a week.

--Poor rural children are also less than half as likely to eat vitamin A-rich fruits or vegetables on a regular basis (at least three times per week) as are poor urban children.

-- The urbanization-related trend appears to decline with increasing age; e.g., the rural elderly do nearly as well with regard to these foods as do their urban counterparts (for total fruits and vegetables, they reported even higher consumption than the urban poor).

Chapter III

Analysis of NHANES II Data—Part II

INTRODUCTION

This section of the report presents the results of a more comprehensive set of analyses of data from the second National Health and Nutrition Examination Survey (NHANES II). In addition to data on dietary intake, an examination of other non-dietary information from the NHANES II survey (i.e., biochemical measures) is included. Unlike in Part I, the data included in this section are broken down and presented by sex so that varying effects of urbanization and poverty upon nutritional status could be identified. In addition, data were also examined for blacks and whites separately.

METHODS PART II

METHODS/ANALYTIC APPROACH

As with the other analyses presented in this report, an effort was made to identify the race-sex-age subgroups within the rural poor population at greatest risk of dietary inadequacy defined by food group consumption frequencies as well as by percent of the Recommended Dietary Allowances (RDAs) and blood values and to determine whether rural residence is associated with a larger negative influence of poverty on dietary adequacy than urban residence.

Based on findings from Public Voice's initial examination, intakes of vitamins A and C, calcium and iron were the 24 hour recall variables of primary interest for follow-up analyses. Biochemical nutrient levels which were also analyzed were serum vitamin A, serum ascorbic acid (vitamin C) and hemoglobin (a key indicator of iron deficiency anemia).

Food groups in the NHANES II food frequency list that contribute a high proportion of vitamins A and C, as well as calcium to the diets of most people, were also analyzed, as follows: (1) intake of milk (combining data from separate questions that assessed intakes of whole, skim, and buttermilk); (2) intake of cheese and cheese products; (3) intakes of fruits and vegetables rich in vitamin A; and (4) intakes of fruits and vegetables rich in vitamin C. As presented previously in Table 2A, dairy products contribute 59% of dietary calcium and 12 percent of vitamin A. Fruits and vegetables contribute 38% of vitamin A and 74% of vitamin C. These food groups were the most significant

sources of these nutrients among the general population. Iron intake did not lend itself to this type of analysis, since contributions to iron intake are more widely distributed across food groups than are contributions to intakes of vitamins A and C and calcium (e.g.,no specific food or food group contributes an exceptionally large proportion of iron to most diets).

In order to distinguish between adequacy and inadequacy of the biochemical and dietary intake variables examined, commonly accepted cut-off levels were used. For example, the cut-off for the percent of the RDA which was used to distinguish adequate from inadequate consumption was two-thirds (67%) of the sex-age specific RDA. This level is frequently used for examining 24 hour recall data, although researchers will use anywhere between 50% and 100%. For nutritional biochemistry cut-offs, the levels used in the original analyses were retained (1). The resulting categorization of dependent variables used in analyses is shown in Table 3-A.

A further discussion of the methods and definitions used for these analyses is presented in Appendix C.

Relative risks of low blood nutrient levels or dietary inadequacies associated with poverty were calculated as described previously (The equation used in determining the confidence interval for the relative risk calculations is also presented in Appendix C).

DATA ANALYSES

Specific questions addressed in the data analyses were as follows:

1) Within the overall pattern of excess risk of inadequate diet and poor nutritional status among the rural poor vs. rural nonpoor, which sex-age groups are at highest risk?

2) Do complementary data on related variables support the impressions given by the 24 hour recall data, specifically:

a) Are the rural poor subgroups at risk of intakes of vitamins A and C and calcium below 2/3 of the RDA also at risk for low intakes of foods that provide the major proportion of these nutrients in the U.S. diet?

b) Are the rural poor subgroups at risk of vitamin A and vitamin C intakes below 2/3 of the RDA also at excess risk for low serum levels of these nutrients?

c) Are the rural poor subgroups at risk of iron intakes below 2/3 of the RDA also at excess risk for low hemoglobin?

Table 3A: Categorization of Dependent Variables Developed from the NHANES II 24 Hour Recall, Food Frequency, and Blood Nutrient Values for These Analyses

analyses

	DIET/NUTRITION VARIABLE			
	Vitamin A	Vitamin C	Calcium	Iron
DATA SOURCE				
24 HR recall:				
LOW	intake < 2/3 RDA*	intake < 2/3 RDA	intake < 2/3 RDA	intake < 2/3 RDA
ACCEPTABLE	intake ≥ 2/3 RDA	intake ≥ 2/3 RDA	intake ≥ 2/3 RDA	intake ≥ 2/3 RDA
Food frequency:				
LOW	intake of high vitamin A fruits and vegetables < once per week	intake of high vitamin C fruits and vegetables < once per week	intake of milk < 5 times per week intake of cheese/ cheese products < once per week	
ACCEPTABLE	intake of high vitamin A fruits and vegetables ≥ once per week	intake of high vitamin C fruits and vegetables ≥ once per week	intake of milk ≥ 5 times per week intake of cheese/ cheese products ≥ once per week	
Blood values:				
LOW	serum vitamin A < 30 ug/100 ml	serum ascorbic acid < 0.3 mg/100 ml	ages 2-4 <10.9 gm/100 ml ages 5-10 <11.2 gm/100 ml	
			males	females
			ages 11-14 <12.0 gm/100 ml	<11.8 gm/100 ml
			ages 15-19 <13.1 gm/100 ml	<11.7 gm/100 ml
			ages 20-44 <13.4 gm/100 ml	<11.9 gm/100 ml
			ages 45-64 <13.2 gm/100 ml	<11.8 gm/100 ml
			ages 65-74 <12.6 gm/100 ml	<11.9 gm/100 ml
ACCEPTABLE	serum vitamin A > 30 ug/100 ml (ages 6 mos to 17 years)	serum ascorbic acid ≥ 0.3 mg/100 ml	ages 2-4 ≥10.9 gm/100 ml ages 5-10 ≥ 11.2 gm/100 ml	
			males	females
			ages 11-14 ≥ 12.0 gm/100 ml	≥ 11.8 gm/100 ml
			ages 15-19 ≥ 13.1 gm/100 ml	≥ 11.7 gm/100 ml
			ages 20-44 ≥ 13.4 gm/100 ml	≥ 11.9 gm/100 ml
			ages 45-64 ≥ 13.2 gm/100 ml	≥ 11.8 gm/100 ml
			ages 65-74 ≥ 12.6 gm/100 ml	≥ 11.9 gm/100 ml

* age-sex specific 1980 Recommended Dietary Allowance

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25)

3) Are the negative influences of poverty on dietary adequacy in rural vs. urban areas at a similar level?

All analyses were done using the Statistical Analysis System[26].

Unless otherwise specified, estimates of proportions or means are based on weighted data. The actual (unweighted) numbers of persons examined in NHANES II by age, sex and racial group are presented in Table 3-B. Prevalences of low or acceptable values of the categorical variables were calculated using crosstabulation procedures to calculate the percentages for poor and nonpoor subgroups.

Table 3B: Numbers of Persons in NHANES II, by Age, Sex, Race, Rural or Urban Residence, and Poverty Status

	RURAL		URBAN		TOTAL
	Poor[1]	Non-poor[2]	Poor	Non poor	
White males:					
ages 3-19 years	822	600	307	301	2030
ages 20-44 years	405	525	125	327	1382
ages 45-64 years	254	519	79	262	1114
ages 65-74 years	269	257	73	145	744
White females:					
ages 3-19 years	780	544	306	247	1877
ages 20-44 years	470	514	164	290	1438
ages 45-64 years	348	515	108	282	1253
ages 65-74 years	355	264	138	133	890
Black males:					
ages 3-19 years	97	14	316	76	503
ages 20-44 years	36	15	83	83	217
ages 45-64 years	24	7	63	55	149
ages 65-74 years	20	6	48	25	99
Black females:					
ages 3-19 years	100	10	305	54	469
ages 20-44 years	39	15	128	64	246
ages 45-64 years	36	3	95	49	183
ages 65-74 years	25	3	69	18	115
TOTAL	4080	3811	2407	2411	12,709

[1] Poverty income ratio <1.99; see text for definition of poverty income ratio

[2] Poverty income ratio ≥ 2.00

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25)

Effects of poverty, age, sex, and race on dietary intakes of vitamins A and C, calcium and iron (expressed as a percent of the RDA) and of serum vitamins A and C and hemoglobin, were estimated for the rural and urban populations using a general linear models procedure in SAS. This approach permitted an assessment of the difference in mean percent of the RDA or difference in blood values as income level increased after adjustment for the differences in income and dietary intakes or blood levels across age, sex, and race. Statistical significance of differences across PIR strata was assessed using the analysis of variance table provided by SAS, recognizing that the NHANES II sample design may have resulted in an overstatement of statistical significance levels calculated using simple random sampling assumptions.

RESULTS

Prevalences of dietary inadequacies and low blood values among rural whites by age, sex, and poverty status and among rural blacks, by poverty status.

Tables 3-C and 3-D give prevalences of low dietary intakes or blood levels among the rural poor and nonpoor for four age groups of white males and females. Findings for blacks are given in table 3-E. The relative risk data for whites and blacks are summarized in table 3-F. In all four tables, data based on the 24-hour recall (expressed in terms of percent of the RDA), on the food frequency questionnaire (intakes of dairy products, fruits and vegetables) and on the levels of key nutrients in blood are grouped by nutrient. For example, under vitamin A, data are listed for the following variables: the percent of each subgroup reporting intakes below 2/3 of the age-sex specific RDA in the 24-hour recall interview; the percent reporting consumption of high vitamin A fruits and vegetables less than once per week; the percent reporting consumption of milk less than five times per week and consumption of cheese less than once per week; and, for children ages 3 to 11, the percent with serum vitamin A values less than 30 mg/100 ml. Under vitamin C, fruit and vegetable consumption refers to foods high in vitamin C and, as indicated in the table footnotes, the biochemical measure is serum ascorbic acid. The data for consumption of milk and cheese products are repeated under calcium, since dairy products are major sources of calcium as well as important sources of vitamin A. The iron data consist of 24 hr. recall data and blood hemoglobin values.

Table 3C: Prevalences of Low Dietary Intakes or Blood Levels of Vitamin A, Vitamin C, Calcium and Iron in the Poor (PIR < 2.0) and Nonpoor (PIR greater or equal to 2.0): *White Males*, by Age, NHANES II, *Rural*

	Vitamin A			Vitamin C			Calcium			Iron		
	Poor %	Non poor %	RR[1]	Poor %	Non poor %	RR	Poor %	Non poor %	RR	Poor %	Non poor %	RR
ages 2-19 years:												
< 2/3 RDA	30.1	26.5	1.1	29.3	24.3	1.2	23.6	24.0	1.0	29.5	25.6	1.2
fruit/vegs sources<1/wk	48.0	43.5	1.1	23.6	18.3	1.3						
milk <5/wk	8.9	7.5	1.2				8.9	7.5	1.2			
cheese <1/week	21.9	18.0	1.2				21.9	18.0	1.2			
low biochemical value[2]	40.3	24.9	1.6	1.2	1.3	1.0				4.4	1.5	2.9
ages 20-44 years:												
< 2/3 RDA	51.2	48.0	1.1	34.2	30.9	1.1	27.1	25.6	1.0	6.7	3.2	2.1
fruit/vegs sources<1/wk	49.0	47.8	1.0	32.1	22.1	1.5						
milk <5/wk	37.0	35.9	1.0				37.0	35.9	1.0			
cheese <1/week	20.1	16.0	1.3				20.1	16.0	1.3			
low biochemical value	--	--	--	7.4	4.5	1.6				0.4	2.1	0.2
ages 45-64 years:												
< 2/3 RDA	48.2	46.5	1.0	40.0	29.5	1.4	34.4	37.8	0.9	7.9	5.2	1.5
fruit/vegs sources<1/wk	40.1	40.9	1.0	36.7	20.3	1.8						
milk <5/wk	40.4	38.8	1.0				40.4	38.8	1.0			
cheese <1/week	28.1	15.0	1.9				28.1	15.0	1.9			
low biochemical value	--	--	--	18.6	6.3	2.9				4.4	2.6	1.7
ages >65 years:												
< 2/3 RDA	49.4	38.8	1.3	41.5	25.4	1.6	33.5	39.9	0.8	11.7	7.9	1.5
fruit/vegs sources<1/wk	40.3	35.6	1.1	37.9	13.4	2.8						
milk <5/wk	36.2	32.8	1.1				36.2	32.7	1.1			
cheese <1/week	33.3	19.0	1.8				33.3	19.0	1.8			
low biochemical value	--	--	--	12.4	4.8	2.6				3.9	2.5	1.6

[1] RR=percent of poor divided by percent of non poor

[2] serum vitamin A data were collected for ages 3-11 only; value for vitamin C is serum ascorbic acid; value for iron is hemoglobin

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25)

Table 3D: Prevalences of Low Dietary Intakes or Blood Levels of Vitamin A, Vitamin C, Calcium and Iron in the Poor (PIR < 2.0) and Nonpoor (PIR greater or equal to 2.0): *White Females*, by Age, NHANES II, *Rural*

	Vitamin A			Vitamin C			Calcium			Iron		
	Poor %	Non poor %	RR[1]	Poor %	Non poor %	RR	Poor %	Non poor %	RR	Poor %	Non poor %	RR
ages 2-19 years:												
< 2/3 RDA	39.8	39.2	1.0	38.6	34.9	1.1	44.0	41.0	1.1	53.0	50.7	1.0
fruit/vegs sources<1/wk	53.6	48.7	1.1	26.3	18.0	1.5						
milk <5/wk	12.2	11.2	1.1				12.2	11.2	1.1			
cheese <1/week	20.6	19.1	1.1				20.6	19.1	1.1			
low biochemical value[2]	41.4	33.2	1.3	2.2	1.1	1.9				2.8	1.5	1.9
ages 20-44 years:												
< 2/3 RDA	57.0	49.0	1.2	49.8	41.2	1.2	54.6	49.1	1.1	69.4	68.2	1.0
fruit/vegs sources<1/wk	46.1	41.9	1.1	27.7	17.8	1.6						
milk <5/wk	47.0	48.5	1.0				47.0	48.5	1.0			
cheese <1/week	17.7	13.1	1.4				17.7	13.1	1.4			
low biochemical value	--	--	--	4.2	3.2	1.3				5.9	3.3	1.8
ages 45-64 years:												
< 2/3 RDA	48.9	44.3	1.1	45.8	29.3	1.6	57.5	56.9	1.0	39.4	38.4	1.0
fruit/vegs sources<1/wk	40.0	31.3	1.3	29.7	13.9	2.1						
milk <5/wk	47.3	50.6	0.9				47.3	50.6	0.9			
cheese <1/week	29.5	14.2	2.1				29.5	14.2	2.1			
low biochemical value	--	--	--	5.6	2.9	1.9				5.0	3.8	1.3
ages >65 years:												
< 2/3 RDA	40.2	41.5	1.0	35.0	25.4	1.4	58.4	63.3	0.9	31.8	24.1	1.3
fruit/vegs sources<1/wk	36.1	28.6	1.3	22.6	15.2	1.5						
milk <5/wk	38.8	41.6	0.9				38.8	41.6	0.9			
cheese <1/week	29.6	22.6	1.3				29.6	22.6	1.3			
low biochemical value	--	--	--	2.0	0.9	2.2				2.5	2.1	1.2

[1] RR=percent of poor divided by percent of non poor

[2] serum vitamin A data were collected for ages 3-11 only; value for vitamin C is serum ascorbic acid; value for iron is hemoglobin

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25)

Table 3E: Prevalences of Low Dietary Intakes or Blood Levels of Vitamin A, Vitamin C, Calcium and Iron in the Poor (PIR < 2.0) and Nonpoor (PIR greater or equal to 2.0): *Blacks*, Males and Females, NHANES II, *Rural*

	Vitamin A			Vitamin C			Calcium			Iron		
	Poor %	Non poor %	RR[1]	Poor %	Non poor %	RR	Poor %	Non poor %	RR	Poor %	Non poor %	RR
< 2/3 RDA	48.2	36.1	1.3	45.5	27.5	1.7	58.0	47.7	1.2	44.8	29.9	1.5
fruit/vegs sources<1/wk	42.6	24.1	1.8	27.3	12.7	2.1						
milk <5/wk	43.8	39.2	1.1				43.8	39.2	1.1			
cheese <1/week	39.9	33.5	1.2				39.9	33.5	1.2			
low biochemical value2	48.6	28.0	1.7	5.8	5.4	1.1				14.0	12.8	1.1

[1] RR=percent of poor divided by percent of non poor

[2] serum vitamin A data were collected for ages 3-11 only; value for vitamin C is serum ascorbic acid; value for iron is hemoglobin;

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25)

Table 3F: Summary of Associations of Rural Poverty with Indices of Dietary Adequacy of Vitamin A, Vitamin C, Calcium and Iron: Whites, by Age-Sex; Blacks, Ages and Sexes Combined, NHANES II (based on Tables 3C–3H)

Notation:
- \+ indicates poor vs. non poor relative risk 1.3-1.5
- ++ indicates poor vs. non poor relative risk 1.5-1.9
- +++ indicates poor vs. non poor relative risk ≥ 2.0
- = indicates poor vs. non poor relative risk ≤1.2
- blank indicates no relevant data

	Vitamin A		Vitamin C		Calcium		Iron	
WHITES	M	F	M	F	M	F	M	F
ages 3-19 years:								
< 2/3 RDA	=	=	=	=	=	=	=	=
fruit/vegs sources<1/wk	=	=	+	++				
milk <5/wk	=	=			=	=		
cheese <1/week	=	=			=	=		
low biochemical value[1]	++	+	=	++			+++	++
ages 20-44 years:								
< 2/3 RDA	=	=	=	=	=	=	+++	=
fruit/vegs sources<1/wk	=	=	++	++				
milk <5/wk	=	=			=	=		
cheese <1/week	+	+			+	+		
low biochemical value			++	+			=	++
ages 45-64 years:								
< 2/3 RDA	=	=	+	++	=	=	++	=
fruit/vegs sources<1/wk	=	+	++	+++				
milk <5/wk	=	=			=	=		
cheese <1/week	++	+++			++	+++		
low biochemical value			+++	++			++	+
ages >65 years:								
< 2/3 RDA	+	=	++	+	=	=	++	+
fruit/vegs sources<1/wk	=	+	+++	++				
milk <5/wk	=	=			=	=		
cheese <1/week	++	+			++	+		
low biochemical value			+++	+++			++	+
BLACKS:								
< 2/3 RDA	+		++		+		++	
fruit/vegs sources<1/wk	++		+++				++	
milk <5/wk	=				=			
cheese <1/week	+				+			
low biochemical value	++		=				=	

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25)

Vitamin A:
Among the rural poor whites, the prevalence of low vitamin A intakes was lowest in the 2-19 year age group and higher among adults. Rural poor females have a higher prevalence of low vitamin A intakes than males before age 45 and a similar or lower prevalence than males above age 45. An excess of low vitamin A intakes among rural poor males was not evident on the basis of either the RDA data or the data on consumption of vitamin A rich fruits and vegetables. Elderly males (ages 65-74), are an exception; they were 30% more likely to have vitamin A intakes below 2/3 of the RDA. Among rural white females 20-44 years old, the poor were 20% more likely to have vitamin A intakes below the RDA than the nonpoor; among women ages 45 years and over, the poor were 30% more likely than nonpoor to consume few vitamin A-rich fruits and vegetables. Low levels of milk consumption were in similar prevalence among the rural poor and nonpoor, but low cheese consumption was reported substantially more often by the poor compared to the nonpoor, among both males and females. Among rural white children ages 3-11, for whom serum vitamin A determinations were done, the poor boys and girls were, respectively, 60% and 30%, more likely to have low levels than their nonpoor counterparts.

The vitamin A data for rural blacks also indicate excess risk for the poor compared to the nonpoor.

Vitamin C:
The prevalence of vitamin C intakes below 2/3 of the RDA among rural poor whites were generally lower than prevalences observed for low vitamin A intakes. Among rural poor white males, the prevalence of vitamin C intakes below 2/3 of the RDA increased with age from 29% in the 2-19 year age group to 42% in 65-74 year olds. Among rural poor white females, 65-74 year olds had the lowest prevalence of vitamin C intakes below 2/3 of the RDA and the 20-44 year olds had the highest prevalence. At all ages below 65, rural poor white females were more likely than rural poor white males to have low vitamin C intakes. With few exceptions, the indices of vitamin C status indicated a marked higher level of risk of inadequate vitamin C intake for the rural poor whites compared to rural nonpoor whites.

For rural blacks, an excess risk of low vitamin C intakes in the poor compared to the nonpoor is observed in the dietary and food consumption data.

Calcium:
Prevalences of calcium intake below 2/3 of the RDA in the rural white poor population were lowest among 2-19 year olds, highest among adults ages 45 and over, and higher among females than males at all ages. However, prevalence of low intakes of calcium or low milk consumption were not in excess prevalence among the

rural white poor compared to the nonpoor. As noted earlier in discussing intakes of sources of vitamin A, the data in all age groups consistently indicated lower cheese consumption among the rural white poor compared to the rural white nonpoor.

Among rural blacks, the poor were 20% more likely than the nonpoor to have low intakes of calcium. As observed for whites, rural poor blacks were more likely to have low cheese consumption than nonpoor blacks.

Iron:
Among rural poor white males, prevalences of iron intakes below 2/3 of the RDA were highest among 2-19 year olds and higher among 65-74 year olds than among adults in the 20-64 year age range. Among rural poor white females, the prevalence of low iron intake was much higher than among males, at all ages. The 20-44 year age group of rural white poor females was at highest risk of having low iron intake, followed by 2-19 year olds. Among rural white males, dietary iron intakes and hemoglobin data showed an excess risk in the poor compared to the nonpoor with the exception of the hemoglobin data for 20-44 year old males. Among rural white females, low iron intakes were in excess among the poor only in elderly women. However, the hemoglobin data showed a 20% to 90% excess of low hemoglobin levels among rural poor vs. rural nonpoor white females in various age groups.

The iron intake data for rural blacks showed lower iron intake among the poor than nonpoor; an excess of low hemoglobin was not observed. The prevalence of low hemoglobin levels was substantially higher in blacks than in whites.

SUMMARY OF FINDINGS

High prevalences of low dietary intakes of vitamins A and C, calcium and iron and of low serum vitamin values or hemoglobin levels were observed among the rural poor, with different patterns of risk across age, sex, and nutrient. The adult and elderly poor among rural whites appear to be at higher risk than rural white poor children and adolescents. Rural white poor females appear to be at higher risk than males. Rural poor blacks appear to be at higher risk than rural poor whites, but the inability to compare racial groups on an age-specific basis limits the conclusions that can be drawn in this respect.

Referring to table 3-F, an association of poverty with vitamin A intake among the rural poor was not observed for whites, although poverty was associated with a higher prevalence of low vitamin A intakes among blacks. In contrast, a strong and consistent association of poverty with inadequate intakes of vitamin C was observed for almost all indices examined, in all age-sex groups of rural whites and also among rural blacks. Calcium intakes were not lower in rural poor whites relative to rural nonpoor

whites, although a consistent finding of lower cheese intake associated with poverty in rural areas was noted. Rural poor blacks had higher prevalences of calcium intakes below 2/3 of the RDA than nonpoor blacks. Low hemoglobin levels were observed more often in rural poor whites than in rural nonpoor whites in all age-sex groups except young adult males. An excess prevalence of low iron intake in the rural poor was observed in adult white males (ages 20 and over), elderly white females, and blacks.

Comparison of the association of poverty with inadequate diets among whites in rural vs. urban areas.

Tables 3-G and 3-H present data for urban whites that are equivalent to the data for rural whites presented in Tables 3-C and 3-D. By comparing these two sets of tables, i.e., examining the prevalences and relative risks for poor vs. nonpoor within each age-sex group and nutrient category, similarities or differences between whites in the rural and urban poor populations can be identified. (The inability to generate stable estimates of age-sex specific prevalences by poverty status in blacks precluded this type of specific urban vs. rural comparison).

The prevalences of nutrition problems were in some instances higher among the rural than urban poor population and in other instances higher in the urban poor than in the rural poor population. In males, a consistent pattern of risk in the rural population could not be identified. In females, rural women experienced a higher risk of low intakes of vitamins A and C, calcium and iron.

Of perhaps greater interest than the absolute prevalences, however, are the relative risks of low dietary intakes or blood values in the rural and urban poor vs nonpoor. For the vitamin A variables, the data suggest a somewhat stronger negative influence of poverty in urban than rural areas, at least for some age groups. However, where relative risks associated with poverty in rural areas are lower than in urban areas, this generally results from a higher prevalence of low intakes in the rural population in general (i.e., higher prevalences of low dietary intakes among the rural nonpoor than the urban nonpoor).

The consistent association of poverty with inadequate intake of vitamin C in the rural population is also evident in the data for urban white males, with some very high relative risks for the urban poor vs. nonpoor males. In the data for urban white females, the association of poverty with inadequate vitamin C is less consistent than in the rural data and is not evident at all among white urban females in the 20-44 year age range.

An effect of poverty on calcium intake was not observed

Table 3G: Prevalences of Low Dietary Intakes or Blood Levels of Vitamin A, Vitamin C, Calcium and Iron in the Poor (PIR < 2.0) and Nonpoor (PIR greater or equal to 2.0): *White Females*, by Age, NHANES II, *Urban*

	Vitamin A			Vitamin C			Calcium			Iron		
	Poor %	Non poor %	RR[1]	Poor %	Non poor %	RR	Poor %	Non poor %	RR	Poor %	Non poor %	RR
ages 2-19 years:												
< 2/3 RDA	31.0	30.8	1.0	23.4	21.3	1.1	27.2	27.7	1.0	30.0	24.5	1.3
fruit/vegs sources<1/wk	46.4	45.7	1.0	15.3	13.7	1.1						
milk <5/wk	9.4	8.0	1.2				9.4	8.0	1.2			
cheese <1/week	14.3	20.1	0.7				14.3	20.1	0.7			
low biochemical value[2]	36.8	23.2	1.6	1.2	0.9	1.3				3.9	1.8	2.1
ages 20-44 years:												
< 2/3 RDA	53.0	42.5	1.2	36.8	31.4	1.2	24.2	23.5	1.0	9.9	4.5	2.2
fruit/vegs sources<1/wk	43.9	44.7	1.0	22.8	17.3	1.3						
milk <5/wk	41.4	32.9	1.3				41.4	32.9	1.3			
cheese <1/week	15.9	11.8	1.3				15.9	11.8	1.3			
low biochemical value	--	--	--	7.4	4.9	1.5				2.5	1.4	1.8
ages 45-64 years:												
< 2/3 RDA	56.3	39.6	1.4	53.7	26.4	2.0	38.7	29.4	1.3	14.0	5.8	2.4
fruit/vegs sources<1/wk	40.2	33.2	1.2	35.8	13.2	2.7						
milk <5/wk	51.3	41.3	1.2				51.3	41.3	1.2			
cheese <1/week	22.9	21.0	1.1				22.9	21.0	1.1			
low biochemical value	--	--	--	31.5	3.6	8.9				5.5	4.6	1.2
ages >65 years:												
< 2/3 RDA	49.4	42.4	1.2	32.8	18.8	1.7	49.8	48.4	1.0	10.9	8.4	1.3
fruit/vegs sources<1/wk	53.9	28.3	1.9	26.2	16.8	1.6						
milk <5/wk	44.6	43.1	1.0				44.6	43.1	1.0			
cheese <1/week	34.0	25.9	1.3				34.0	25.9	1.3			
low biochemical value	--	--	--	6.9	1.9	3.5				4.2	3.0	1.4

[1] RR=percent of poor divided by percent of non poor

[2] serum vitamin A data were collected for ages 3-11 only; value for vitamin C is serum ascorbic acid; value for iron is hemoglobin

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987. (25)

Table 3H: Prevalences of Low Dietary Intakes or Blood Levels of Vitamin A, Vitamin C, Calcium and Iron in the Poor (PIR < 2.0) and Nonpoor (PIR greater or equal to 2.0): *White Females*, by Age, NHANES II, *Urban*

	Vitamin A			Vitamin C			Calcium			Iron		
	Poor %	Non poor %	RR[1]	Poor %	Non poor %	RR	Poor %	Non poor %	RR	Poor %	Non poor %	RR
ages 2-19 years:												
< 2/3 RDA	40.6	36.4	1.1	31.8	32.6	1.0	41.9	40.4	1.0	56.7	54.4	1.1
fruit/vegs sources<1/wk	47.6	43.7	1.1	22.0	13.6	1.6						
milk <5/wk	12.4	16.9	0.7				12.4	16.9	0.7			
cheese <1/week	19.6	20.7	0.9				19.6	20.7	0.9			
low biochemical value[2]	28.7	24.3	1.2	0.0	1.0	*				3.4	3.4	1.0
ages 20-44 years:												
< 2/3 RDA	52.9	46.3	1.1	38.7	36.4	1.1	49.1	47.9	1.0	69.6	63.7	1.1
fruit/vegs sources<1/wk	39.7	40.5	1.0	17.1	15.5	1.1						
milk <5/wk	45.9	48.8	0.9				45.9	48.8	0.9			
cheese <1/week	15.7	12.9	1.2				15.7	12.9	1.2			
low biochemical value	--	--	--	1.6	2.6	0.6				6.3	4.4	1.5
ages 45-64 years:												
< 2/3 RDA	42.1	42.4	1.0	33.2	35.1	0.9	49.8	52.1	1.0	47.3	34.3	1.4
fruit/vegs sources<1/wk	40.9	22.9	1.8	17.8	9.8	1.1						
milk <5/wk	41.1	48.7	0.8				41.1	48.7	0.8			
cheese <1/week	21.1	14.2	1.5				21.1	14.2	1.5			
low biochemical value	--	--	--	3.5	2.3	1.5				3.6	3.1	1.2
ages >65 years:												
< 2/3 RDA	41.1	27.1	1.5	25.8	20.0	1.3	54.6	49.4	1.1	22.2	14.0	1.6
fruit/vegs sources<1/wk	38.8	26.5	1.5	20.3	11.2	1.8						
milk <5/wk	38.4	23.9	1.6				38.4	23.9	1.6			
cheese <1/week	22.6	17.1	1.3				22.6	17.1	1.3			
low biochemical value	--	--	--	3.6	0.0	*				4.2	5.4	0.8

[1] RR=percent of poor divided by percent of non poor

[2] serum vitamin A data were collected for ages 3-11 only; value for vitamin C is serum ascorbic acid; value for iron is hemoglobin

* indicates that the RR cannot be calculated because of a zero in the numerator or denominator

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987. (25)

for rural whites and is also not present in the data for urban whites, although cheese and, in some subgroups, milk consumption is lower in the poor than the nonpoor. In the data for iron intake and hemoglobin levels, the pattern of excess risk associated with poverty is similar in urban and rural white males--more consistent in urban white males. Among white females, evidence of a negative effect of poverty on iron intake or hemoglobin level is approximately similar in the rural and urban areas.

Age-sex-race adjusted dietary intakes (% RDA) and blood levels across income strata for rural and urban residents.

The analysis of variance approach displayed in Table 3-I permits comparison of the effects of poverty on the distributions of nutrient intakes and blood nutrient values in rural versus urban populations. The relative status of rural and urban residents can also be assessed from these analyses by comparing within poverty strata means across residence categories.

Only secondary emphasis has been placed on using the analysis of variance approach because the overall distributions are disproportionately influenced by individuals with high nutrient intakes among the population (as previously discussed). Thus, mean nutrient intakes, even within low-income strata can give the misleading impression that intakes of the entire subgroup are within the adequate range, which is not the case. For example, note that in Table 3-I, the mean intakes for vitamins A and C and for iron are 100% of the RDA or better for all income strata, whereas,in Tables 3-C-3-E,3-G and 3-H, substantial proportions of the population with intakes below 2/3 of the RDA are indicated.

The mean intakes of all four nutrients, expressed as percents of the RDA, are higher in the urban than in the rural population in all income strata except the lowest income group for iron and the highest income group for calcium. The serum vitamin A and vitamin C data show the same pattern of higher values in the urban population, but the rural and urban hemoglobin levels overlap.

For vitamin A intake, neither residence subgroup shows a strong gradient in mean percent of the RDA with increasing income. Vitamin C, on the other hand shows a significant positive effect of increasing income on percent of the RDA and on serum vitamin C level in both the rural and urban populations.

For both calcium and iron, a strong effect of poverty on dietary intake was observed before taking age, sex, and race differences into account (not shown), but the income differences were reduced or removed after adjustment for age, race, and sex. This suggests that, within rural and within urban areas, poverty is associated with the adequacy of calcium and iron intakes

Table 3I: Mean Percent of the RDA for Intakes of Vitamins A and C, Calcium and Iron and Mean Levels of Serum Vitamin A, Serum Vitamin C, and Hemoglobin by Income Strata, Within Rural or Urban Residence, After Adjustment for Age, Sex, and Race, NHANES II

	% RDA Vitamin A (mean± SE)[1]		% RDA Vitamin C (mean± SE)		% RDA Calcium (mean± SE)		% RDA Iron (mean± SE)	
PIR STRATA	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
0 -0.75	120(8)	131(10)	141(8)	161(10)	85(3)	83(3)	106(3)	100(3)
0.76-1.00	109(7)	127(11)	130(7)	152(11)	78(3)	84(4)	97(3)	108(4)
1.01-1.30	133(8)	141(12)	141(7)	195(12)	76(3)	82(4)	101(3)	112(4)
1.31-1.80	128(6)	130(9)	159(6)	202(9)	80(3)	83(3)	104(3)	108(3)
1.81-2.00	119(8)	139(12)	155(8)	171(13)	78(3)	80(4)	102(3)	103(4)
2.01-3.00	132(6)	135(7)	170(6)	181(7)	80(2)	81(2)	104(2)	112(2)
3.01+	137(6)	142(6)	179(6)	198(7)	84(2)	83(2)	110(2)	112(2)
p[2]	0.0126	0.8195	0.0001	0.0004	0.0752	0.9840	0.0313	0.0012

	Serum Vitamin A[3] (mg/100 ml) (mean± SE)[1]		Serum Vitamin C (mg/100 ml) (mean± SE)		Hemoglobin (g/100 ml) (mean± SE)	
PIR STRATA	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN
0- 0.75	31.6(0.9)	32.2(1.1)	0.9(0.03)	1.0(0.03)	13.7(0.05)	13.7(0.06)
0.76-1.00	32.7(1.1)	30.8(1.5)	0.8(0.03)	0.9(0.03)	13.8(0.06)	13.7(0.07)
1.01-1.30	33.6(0.9)	34.4(1.4)	0.9(0.03)	1.0(0.03)	13.8(0.05)	13.8(0.07)
1.31-1.80	31.6(0.8)	31.1(1.1)	0.9(0.03)	1.1(0.03)	13.7(0.04)	13.7(0.05)
1.81-2.00	32.2(1.1)	38.0(1.6)	1.0(0.01)	1.1(0.04)	13.8(0.06)	13.7(0.07)
2.01-3.00	33.3(0.8)	32.9(1.0)	1.0(0.02)	1.1(0.02)	13.8(0.04)	13.7(0.04)
3.01+	33.5(0.9)	34.9(1.0)	1.1(0.02)	1.1(0.02)	13.9(0.04)	13.8(0.04)
p[2]	0.2059	0.0025	0.0001	0.0001	0.0018	0.5317

[1] mean and standard error; sample weights were used in calculating means; however, standard errors do not include adjustments for sample design effects

[2] based on standard errors not adjusted for design effects

[3] ages 3-11 only

Source: Kumanyika, S. and Chee, E., "Effects of Poverty on Dietary Adequacy in the Rural United States," November 1987, (25)

primarily through differences in the sex-age-race distributions of the poor and nonpoor. Differences in hemoglobin levels across income strata were small in both the rural and urban populations. Income differences in dietary iron and hemoglobin included some that were statistically significant, but a clear gradient of increase in iron intake as income increased was not observed.

Overall, these findings are consistent with the findings presented earlier based on prevalences of low values, i.e. higher overall risk of low intakes in rural vs. urban residents; clear effects of poverty on dietary adequacy for vitamin C, less consistent but still evident effects of low income on iron status, and essentially no effect of income on dietary adequacy of vitamin A and calcium.

Chapter IV

Analysis of USDA's Continuing Survey of Food Intakes by Individuals (CSFII)

INTRODUCTION

The data presented in this section are of special interest as they represent the most current dietary data available from a large-scale, national sample.

In this section of the report, consumption data are analyzed and presented in several manners:

I) Recently published data are analyzed for effects of poverty and rural residence on dietary consumption.

II) Data from the low-income component of CSFII on frequency and level of consumption of selected groups of fruits and vegetables were compared to similar data from the non-low income population. These analyses were carried out and provided by Dr. John Stanton and Debra Rose at the Institute for Food Marketing at St. Joseph's University in Philadelphia, Pa.

CSFII (THE CONTINUING SURVEY OF FOOD INTAKES BY INDIVIDUALS)

The Continuing Survey of Food Intakes By Individuals (CSFII) was initiated in 1985 to provide timely information on the adequacy of diets the U.S. population. It is intended as a complement to the larger nationwide food consumption surveys conducted by USDA approximately every 10 years[27].

The CSFII 1985 sample design was drawn from all private households in the contiguous United States. The survey was designed to provide a representative sample of the 48 contiguous states. A stratified area probability design was used which took into account geographic location, urbanization and socioeconomic considerations.

The household screening procedures used were designed to provide three separate samples: 1) women 19-50 years of age of all incomes and their children 1-5 years of age; 2) a sample of low-income women and their children in the same age ranges; and 3) men 10 to 50 years of age. In addition, a separate low-income survey was conducted of low-income women 19-50 years of age and their children 1-5 years of age.

PART I. RE-ANALYSIS OF RECENTLY PUBLISHED CFSII DATA

METHODS

For each of these groups of analyses, the following comparisons and definitions were applied: Comparisons were made between the rural and urban poor, and between the rural poor and rural near poor, and rural nonpoor. Central city residents were defined as those who reside in a city of at least 50,000 residents inside an MSA (Metropolitan Statistical Area). Suburban residents were defined as those living outside a central city but within an MSA. Nonmetropolitan residents are defined as those living outside an MSA. In addition, for each of the analyses presented, data are from women age 19-50 years, and their children 1-5 years of age.

The data presented in this section were generated directly from published USDA data tables[28].

These age-sex specific data are from 4 non-consecutive days of intake and expressed as the mean per-day intake for the group, as a percent of the RDA. (The data included in this analysis are from those women who completed the first day recall and at least 3 additional 1-day recalls of dietary intake for themselves and their children.)

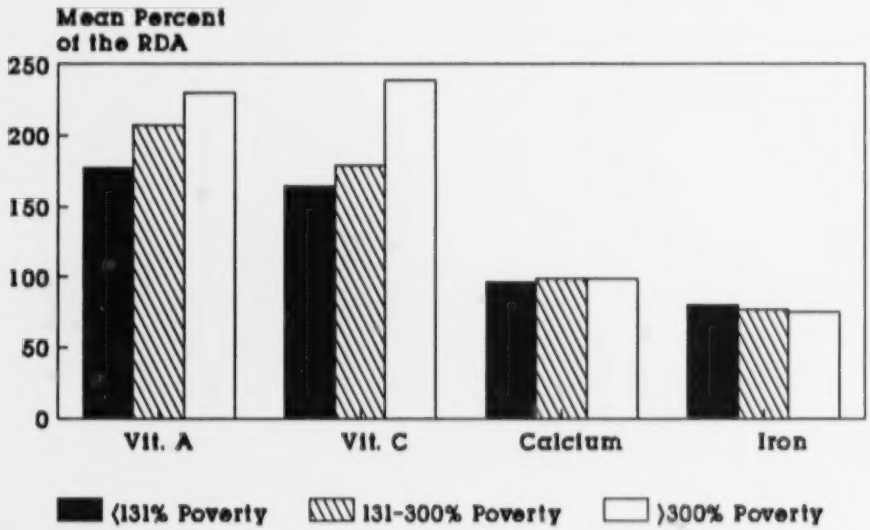
Unlike other analyses presented in this report, these data are not available by separate poverty groups within differing urbanizations, i.e., the rural poor. Rather, they are limited to either the poverty group (for all urbanizations), or by urbanization (for all incomes). This is only true for this section of analyses (the re-analysis of published data).

Table 4A: Comparison of Intakes by Poverty and Urbanization

	.....CHILDREN.....				.....WOMEN.....			
INCOME (% poverty)	Vit. A	Vit. C	Calcium	Iron	Vit. A	Vit. C	Calcium	Iron
<131%	177	164	96	80	108	102	62	54
131-300%	207	179	99	77	123	126	74	58
300%+	230	239	99	75	130	142	80	58
URBANIZATION								
	Vit. A	Vit. C	Calcium	Iron	Vit. A	Vit. C	Calcium	Iron
Central Cities	208	192	100	79	126	129	80	58
Suburban Areas	205	196	99	80	125	130	74	56
Nonmetro Areas	170	156	93	74	111	104	66	55

* Mean per individual per day (four nonconsecutive days, 1985).
Source: USDA; NFCS, CSFII, Report No. 85-4

Fig. 4A: Mean Intakes of Children by Income (Percent of RDA)



Source: USDA; NFCS, CSFII
Report No. 85-4

RESULTS

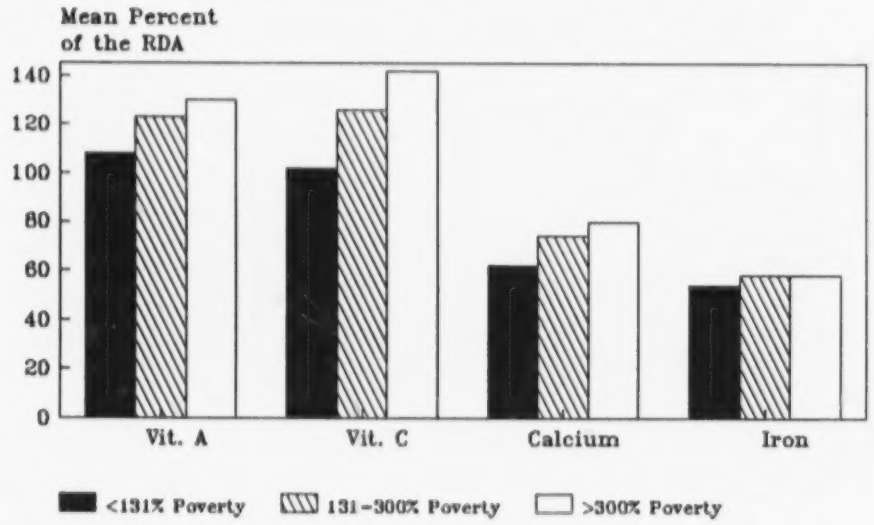
MEAN DIETARY INTAKE BY INCOME AND URBANIZATION LEVEL
Mean daily intake for vitamins A and C, Calcium and Iron are presented in Table 4A.

By Income
Figures 4A and 4B present these data by income group. As these data demonstrate, among both women and children, a strong income-based gradient exists with regard to vitamins A and C. For calcium and iron, no clear gradient exists among children, however among women an intake gradient is experienced. Among both age groups, the gradient is strongest for vitamin C.

By Urbanization
These data demonstrate a similar pattern as described for income e.g., as urbanization declines, so does mean intake of each of these nutrients. (Mean consumption is similar among central city and suburban residents, but declines precipitously among nonmetropolitan residents.) Again, among both age groups, the urbanization-related trend is greatest for vitamin C closely followed by vitamin A (see figures 4C and 4D).

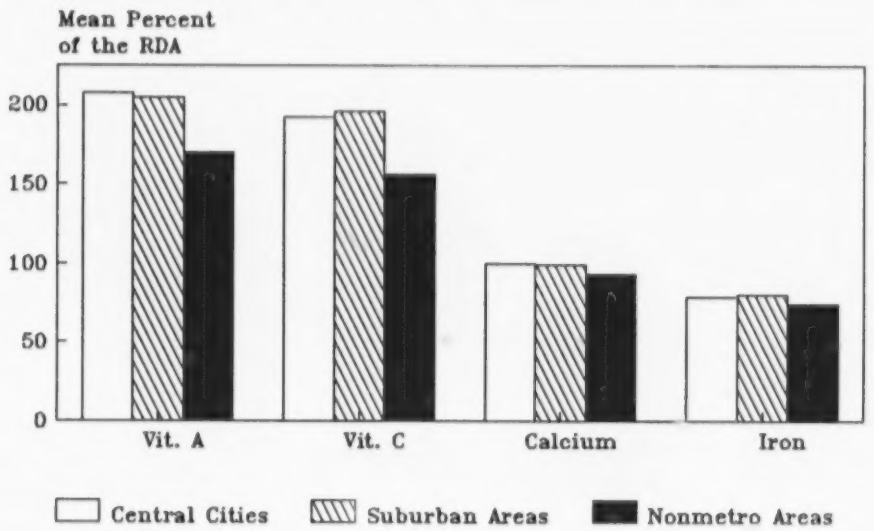
These analyses demonstrate significantly lower consumption of these nutrients among rural residents and among the poor.

Fig. 4B: Mean Intakes of Women by Income (Percent of RDA)



Source: Data From USDA; NFCS, CSFII
Report No. 85-4

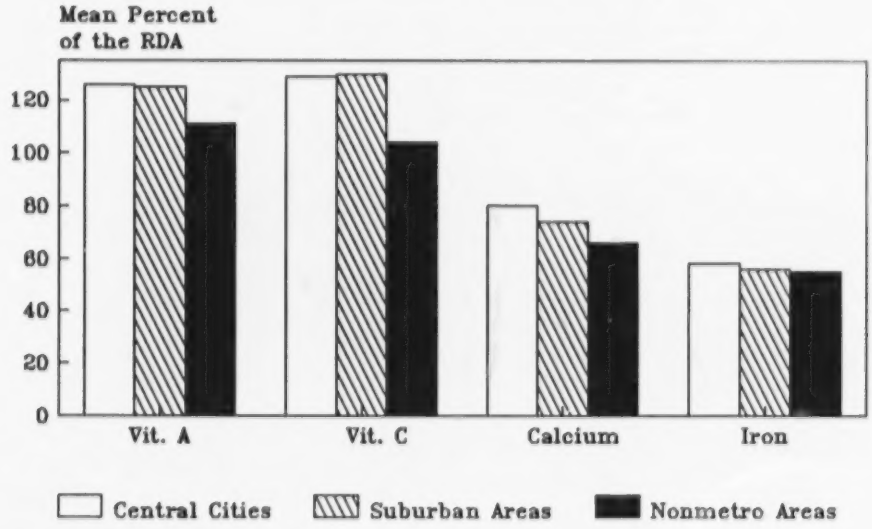
Fig. 4C: Mean Intakes of Children by Urbanization (Percent of RDA)



Source: Data from USDA; NFCS, CSFII
Report No. 85-4

Although the group intakes of these nutrients are, on the average, above the RDA, the consistent deficit experienced among rural residents at all income levels and most severely among the poor, is cause for serious concern. These data indicate that a significantly larger proportion of the low-income rural population is at risk for inadequate consumption of these nutrients than of the low-income urban population. (Appendix E discusses the common misinterpretations which result from reliance upon population mean intakes for assessing the dietary adequacy of population groups.

Fig. 4D: Mean Intakes of Women
by Urbanization (Percent of RDA)



Source: Data from USDA; NFCS, CSFII
Report No. 85-4

PART II: ORIGINAL ANALYSIS OF CSFII CONSUMPTION DATA

METHODS

This analysis involved the combining and comparison of USDA data from two portions of the very recent CSFII: (1) the low-income survey and (2) the "core" sample of women and children of all incomes surveyed in 1985. Included were data from 5,195 persons. By applying weights, these 5,195 sample persons are projected to represent a population of 548,784 persons.

As with the NHANES II analyses, the poor were defined as those in households with incomes below the poverty threshold, near poor were those in households with incomes between the poverty threshold and twice the poverty threshold, and the nonpoor were defined as those in household with incomes over twice the poverty threshold. For these analyses, two urbanization levels were included: nonmetropolitan and metropolitan. Metropolitan areas include both suburban and central city residents. (Relative risks (RR) were calculated as discussed earlier in the methods section of Chapter II and in Appendix B).

Fruit and vegetable groups which provide significant contributions to the dietary intake of the nutrients of interest and which were readily available from CSFII were included in this analysis. These include:citrus fruits and juices, other fruits and juices, potatoes, dark green vegetables, deep yellow vegetables, and tomatoes. (Specific fruits and vegetables included in these groups are presented in Appendix D.)

Consumption of these groups was examined using two measures: (1) the percent who reported consuming each food group on the day of the recall, and (2) the average number of grams consumed. The latter measure was calculated by determining the weight consumed of each group by the total population category (i.e. nonmetro poor), and dividing the weight (in grams) by the number of persons in that population category. Unless otherwise specified, estimates of proportions or means are based on weighted data.

RESULTS

Citrus Fruits and Juices (Excellent sources of vitamin C)

Percent Consuming

-- The rural poor were less likely to consume citrus fruits or juices than their nonpoor neighbors. This gap exists for both women and children.
-- Both poverty and ruralness appear to affect consumption of this group of fruits, e.g. the rural poor are less likely to consume citrus products than are the rural non-poor or the urban poor.This was true for both women and children.
-- Rural black children were significantly less likely to consume citrus than were impoverished black urban children.
-- However, among black women, poor rural residents were slightly more likely to consume citrus than poor urban residents.

Average Intake (in grams)

-- Among both women and children, and across racial groups, the rural poor consumed considerably less citrus than did the urban poor.
-- The rural poor also consumed considerably less of these fruits than did the non-poor.

Table 4B: Urban/Rural Comparison of Consumption of Citrus Fruits and Juices

	% Consuming		Rel.	Gram Intake		Rel.
	Urban	Rural	Risk*	Urban	Rural	Risk*
CHILDREN (1-5)						
(Poverty	28.7	26.3	1.1	56.7	45.8	1.2
100-200% Poverty	30.6	21.9		62.8	41.1	
) 200% Poverty	35.7	44.2		92.5	113.2	
WOMEN (19-50)						
(Poverty	19.3	18.0	1.1	56.7	38.3	1.5
100-200% Poverty	23.7	23.2		57.4	49.3	
) 200% Poverty	31.1	21.8		70.9	56.7	
WHITE CHILDREN						
(Poverty	23.5	21.5	1.1	51.6	35.0	1.5
100-200% Poverty	31.6	20.6		58.1	40.4	
WHITE WOMEN						
(Poverty	15.3	15.6	1.0	44.1	32.4	1.4
100-200% Poverty	21.3	20.6		46.6	40.3	
) 200% Poverty	29.3	23.1		62.5	60.1	
BLACK CHILDREN						
(Poverty	32.7	21.1	1.5	62.0	38.5	1.6
BLACK WOMEN						
(Poverty	18.9	24.5	0.8	54.3	56.5	1.0
HISPANIC WOMEN						
(Poverty	28.3	24.7	1.1	83.7	37.9	2.2

* Relative Risk (urban/rural)
Source: Unpublished data from USDA, CSFII

-- The rural-urban disparity was the greatest among the two minority groups examined (Hispanics and Blacks).

Other Fruits and Juices
(Good sources of several nutrients including vitamins A and C, folacin, iron, calcium and others)

Percent Consuming
-- The poor were significantly less likely to consume non-citrus fruits than the nonpoor, this was true in urban and rural areas.
-- Poor rural women were far less likely than children to eat fruits from this group.
-- Poor black children (rural and urban) were considerably less likely than poor white children to consume these foods.
-- Poor rural whites (women and children) were less likely than poor urban whites to consume these foods.
-- Poor rural hispanic children were less likely than other children to consume these foods.

Average Intake (in grams)
-- The gap between the rural poor and the urban poor was largest among hispanic women and white children. Among these groups, the rural poor consumed 20.3 percent and 44 less (respectively) than

Table 4C: Urban/Rural Comparison of Consumption of Other Fruits and Juices (Non-Citrus)

	% Consuming		Rel.	Gram Intake		Rel.
	Urban	Rural	Risk*	Urban	Rural	Risk*
CHILDREN (1-5)						
(Poverty	40.8	40.4	1.0	100.0	100.9	1.0
100-200% Poverty	53.8	48.8		134.7	92.8	
) 200% Poverty	61.4	65.3		173.9	159.4	
WOMEN (19-50)						
(Poverty	21.1	18.1	1.2	43.5	37.4	1.2
100-200% Poverty	31.3	24.5		58.4	43.8	
) 200% Poverty	40.0	41.1		73.4	68.5	
WHITE CHILDREN						
(Poverty	46.1	41.9	1.1	135.8	108.3	1.3
100-200% Poverty	57.1	50.6		141.7	93.9	
WHITE WOMEN						
(Poverty	23.7	17.6	1.3	39.9	39.8	1.0
100-200% Poverty	33.8	24.3		66.0	45.9	
) 200% Poverty	38.8	41.1		72.4	69.0	
BLACK CHILDREN						
(Poverty	30.2	29.9	1.0	51.2	60.8	0.8
BLACK WOMEN						
(Poverty	16.3	13.4	1.2	40.8	36.2	1.1
HISPANIC WOMEN						
(Poverty	22.2	19.9	1.1	47.8	27.0	1.8

* Relative Risk (urban/rural)
Source: Unpublished data from USDA, CSFII

their urban counterparts.
-- Rural black children consumed more of these fruits on the average than poor black urban children.

Potatoes
(Good sources of Vitamin C)

Percent Consuming
-- Poor rural white women and children were significantly more likely to consume potatoes than poor urban whites.
-- Among poor blacks and hispanics, the relationship is reversed, e.g. the urban poor are more likely to consume potatoes in their diet.
-- The gap is especially large for hispanics among whom the rural poor are nearly 50 % less likely to consume potatoes than their urban counterparts.

Average Intake (in grams)
-- Rural poor children consume significantly higher levels of potatoes than do either the urban poor (51.1 grams versus 38.4 grams) or the rural non-poor (38.1 grams).

Table 4D: Urban/Rural Comparison of Consumption of Potatoes

	% Consuming		Rel.	Gram Intake		Rel.
	Urban	Rural	Risk*	Urban	Rural	Risk*
CHILDREN (1-5)						
(Poverty	45.5	56.7	0.8	38.4	51.1	0.8
100-200% Poverty	38.4	52.5		28.4	27.7	
) 200% Poverty	57.2	58.2		39.3	38.1	
WOMEN (19-50)						
(Poverty	39.5	46.0	0.9	52.9	54.9	1.0
100-200% Poverty	42.3	51.8		47.3	63.3	
) 200% Poverty	44.4	46.7		50.4	46.7	
WHITE CHILDREN						
(Poverty	54.0	62.0	0.9	49.2	52.0	0.9
100-200% Poverty	42.4	54.2		27.0	27.9	
WHITE WOMEN						
(Poverty	44.8	54.2	0.8	61.4	65.7	0.9
100-200% Poverty	47.4	54.7		53.2	66.2	
) 200% Poverty	45.0	48.1		50.6	48.0	
BLACK CHILDREN						
(Poverty	40.0	30.4	1.3	31.0	17.2	1.8
BLACK WOMEN						
(Poverty	31.2	24.8	1.3	40.9	28.0	1.5
HISPANIC WOMEN						
(Poverty	43.1	24.3	1.8	54.5	32.4	1.7

* Relative Risk (urban/rural)
Source: Unpublished data from USDA, CSFII

-- The inverse relationship exists among blacks (children and women) and Hispanics.
-- Poor rural black children and women consumed considerably lower amounts than did the other racial groups examined.

Dark Green Vegetables
(Excellent sources of vitamin A and C and calcium; good sources of iron)

Percent Consuming
-- Consumption of this group of vegetables was extremely low among all groups.
-- No significant differences are evident between the rural poor and the urban poor with regard to consumption of these vegetables.
-- An income gradient does exist. The poorer groups are less likely to consume vegetables of this group.
-- Poor rural hispanics were the least likely while rural poor blacks were the most likely to consume this group of vegetables.
-- Among poor blacks, rural residents are more likely than urban blacks.

Table 4E: Urban/Rural Comparison of Consumption of Dark Dark Green Vegetables

	% Consuming		Rel.	Gram Intake		Rel.
	Urban	Rural	Risk*	Urban	Rural	Risk*
CHILDREN (1-5)						
(Poverty	4.4	4.6	1.0	3.4	4.0	0.9
100-200% Poverty	6.6	5.3		5.1	1.2	
) 200% Poverty	11.8	12.0		5.9	9.4	
WOMEN (19-50)						
(Poverty	5.0	5.5	0.9	9.6	7.3	1.3
100-200% Poverty	7.7	5.9		9.1	7.4	
) 200% Poverty	9.6	9.3		9.7	12.2	
WHITE CHILDREN						
(Poverty	5.7	3.6	1.6	4.3	2.2	2.0
100-200% Poverty	5.6	5.1		3.0	1.0	
WHITE WOMEN						
(Poverty	4.8	4.2	1.1	7.3	4.6	1.6
100-200% Poverty	7.5	5.0		9.2	4.4	
) 200% Poverty	9.5	7.8		10.0	12.3	
BLACK CHILDREN						
(Poverty	6.6	13.6	0.5	5.4	19.1	0.3
BLACK WOMEN						
(Poverty	6.8	11.8	0.6	16.2	20.1	0.8
HISPANIC WOMEN						
(Poverty	3.2	2.3	1.4	5.8	2.4	2.4

* Relative Risk (urban/rural)
Source: Unpublished data from USDA, CSFII

Average Intake (in grams)
-- A consistent income gradient is observed: generally the higher the income group the higher the mean intake. However, no significant urbanization-related trend is observed.
-- Poor rural blacks consume significantly higher amounts than poor urban blacks.

Deep Yellow Vegetables
(Excellent sources of vitamins A and C)

Percent Consuming
-- A consistent income effect is observed e.g., with increasing income, the percent who reported consuming these foods increased.
-- Among Whites and Hispanics, the rural poor reported consuming lower levels than their urban counterparts.
-- However among Blacks,the urban poor consumed lower levels.

Average Intake (in grams)
-- Income was related to increasing consumption.
-- Ruralness had an inverse effect on consumption among impoverished Hispanics and Blacks. While poor rural blacks

Table 4F: Urban/Rural Comparison of Consumption of Deep Deep Yellow Vegetables

	% Consuming		Rel.	Gram Intake		Rel.
	Urban	Rural	Risk*	Urban	Rural	Risk*
CHILDREN (1-5)						
(Poverty	5.5	4.1	1.3	2.2	3.0	0.7
100-200% Poverty	9.4	9.1		5.2	5.0	
) 200% Poverty	12.9	0.0		5.8	0.0	
WOMEN (19-50)						
(Poverty	5.4	4.4	1.2	3.6	3.4	1.1
100-200% Poverty	9.3	8.4		6.3	8.3	
) 200% Poverty	13.1	10.4		9.3	6.1	
WHITE CHILDREN						
(Poverty	5.6	2.7	2.1	2.4	1.6	1.5
100-200% Poverty	11.2	9.6		6.7	4.9	
WHITE WOMEN						
(Poverty	4.6	5.4	0.9	3.0	3.7	0.8
100-200% Poverty	8.5	8.3		5.8	8.4	
) 200% Poverty	13.8	11.1		9.9	6.5	
BLACK CHILDREN						
(Poverty	3.8	6.5	0.6	2.1	11.1	0.2
BLACK WOMEN						
(Poverty	3.1	2.8	1.1	3.0	2.5	1.2
HISPANIC WOMEN						
(Poverty	11.3	2.3	4.9	5.7	2.4	2.4

* Relative Risk (urban/rural)
** Relative Risk could not be calculated
Source: Unpublished data from USDA, CSFII

consumed significantly higher levels of these vegetables than their urban counterparts, among Hispanics the reverse was true.

Tomatoes
(Excellent sources of vitamins A and C)

Percent Consuming
-- Consumption of tomato and tomato products is generally more frequent among poor rural children and less frequent among poor rural adults than their urban counterparts. This relationship was true among poor blacks and poor whites.
-- Poor Hispanic women were significantly more likely to consume tomato products than the other ethnicities examined, and they were significantly more likely to do so than their urban counterparts.

Average Intake (in grams)
-- Similar trends were observed in these data as those described above, with the primary difference being that the disparities were somewhat larger, resulting in larger relative risk calculations.

Table 4G: Urban/Rural Comparison of Consumption of Tomatoes

	% Consuming		Rel.	Gram Intake		Rel.
	Urban	Rural	Risk*	Urban	Rural	Risk*
CHILDREN (1-5)						
(Poverty	25.1	33.1	0.8	11.0	20.0	0.6
100-200% Poverty	24.8	18.5		10.3	6.8	
) 200% Poverty	18.9	30.5		9.9	37.8	
WOMEN (19-50)						
(Poverty	24.3	22.6	1.1	19.6	16.1	1.2
100-200% Poverty	26.9	30.8		18.0	17.1	
) 200% Poverty	30.3	30.9		18.3	29.5	
WHITE CHILDREN						
(Poverty	28.4	34.1	0.8	9.1	18.7	0.5
100-200% Poverty	26.8	18.6		9.3	7.3	
WHITE WOMEN						
(Poverty	29.6	24.0	1.2	25.7	16.9	1.5
100-200% Poverty	28.0	31.2		18.3	15.9	
) 200% Poverty	32.2	30.6		18.8	31.0	
BLACK CHILDREN						
(Poverty	13.7	24.4	0.6	4.4	14.9	0.3
BLACK WOMEN						
(Poverty	16.7	12.9	1.3	10.1	10.9	0.9
HISPANIC WOMEN						
(Poverty	22.1	40.6	0.5	17.8	31.1	0.6

* Relative Risk (urban/rural)
Source: Unpublished data from USDA, CSFII

SUMMARY

This analysis of specific fruit and vegetable group consumption revealed a number of striking patterns. These analyses concluded that the most serious shortcomings in the diets of the rural poor appear to be with regard to consumption of citrus fruits and juices.

Citrus Fruits and Juices

-- Overall the rural poor are less likely to consume citrus products than either the rural nonpoor or the urban poor.
-- This rural effect is greatest among black children, among whom poor urban children are more than 50% as likely to have consumed citrus as poor rural children.
-- On the average, poor rural Hispanic women consume less than half as much (in weight) citrus products as do impoverished Hispanic women who live in urban areas.

Other Fruits and Juices (non-citrus)

-- While the rural poor were consistently less likely to consume from this group than the urban poor, income was the critical

determinant of consumption of these products. Generally the non-poor were significantly more likely to consume non-citrus fruits and juices than the poor in both urbanizations.
-- Poor Black children (both rural and urban) were significantly less likely than were poor white children to consume these fruit and juices.

Potatoes
-- Consumption of potatoes in rural versus urban areas was very strongly dependent upon ethnicity; among poor whites, urban residents were less likely to consume potatoes, whereas among Blacks and Hispanic Women, poor rural residents were far more likely.
-- Importantly, poor rural minorities were less than half as likely as their white neighbors to consume potatoes.

Dark Green Vegetables
-- A very small proportion of the population reported consumption of this nutrient rich group of vegetables.
-- Poor rural whites were less likely to consume this group of vegetables than their urban counterparts. However poor rural Blacks were more likely to consume vegetables of this group than either poor urban Blacks or poor whites of either urbanization.
--Poor rural Hispanics were the least likely to consume this group of vegetables.

Deep Yellow Vegetables
-- A very small proportion of the population reported consumption of these rich sources of Vitamins A and C.
-- Poor rural Hispanic Women reported considerably less frequent consumption of this group of vegetables than did their poor urban counterparts.
-- Although poor white urban children consumed this group more frequently than poor white rural children, among poor Black children the reverse was true.

Tomatoes
-- Poor rural Hispanic woman consumed tomatoes considerably more frequently than did any other group--including urbanized Hispanic women.
-- Poor rural Black children consumed tomatoes considerably less frequently than poor rural white children, but more frequently than poor urban Black children.

Chapter V

Discussion and Recommendations

These findings add to our understanding of poverty associated nutritional risks among the rural poor in several respects. The combined evidence from the 24-hour recall, food frequency, and biochemical data provide consistent evidence that the various subgroups of the rural poor are at excess risk of inadequate intakes of vitamins A and C, calcium and iron and the food groups which provide these nutrients. These findings are based upon analyses of the largest and most current sources of nutritional status information on the U.S. population provided by USDA and DHHS.

The primary implication of these findings is that in order to alleviate the excess prevalence of dietary inadequacies among the poor who live in rural areas of the United States, targeted interventions or modifications of existing interventions are needed that address the specifically rural limitations on access to certain foods or food assistance programs. More detailed studies to specify the nature of potentially effective rural poverty-related nutrition interventions are needed. Some of these studies should be region, and locality-specific, since food access and lifestyle factors differ across sub-areas of the country.

The analyses demonstrate that a particularly severe nutritional shortcoming in the diet of the rural poor is the inadequate consumption of fruits or vegetables. In particular, those fruits and vegetables which are rich sources of vitamins A and C appear to be the least adequately consumed by this population. And, especially for the vitamin C group, the rural poor are far more likely than even the urban poor to consume extremely limited amounts in their diets.

Intakes of vitamin A-rich fruits and vegetables were lower among the rural poor compared to the rural non poor especially among white females ages 45 and over, and blacks. Rural poor teenagers had the highest prevalence of low intakes. Whereas intakes of vitamin C rich fruits and vegetables were lower among the poor than the nonpoor within rural areas in all subgroups examined. The extremely low intake of dark green vegetables by poor rural Hispanic women observed in this analysis has been noted by other researchers. Whether this is true for the poor rural Hispanic community in general, or only for the Hispanic subgroup surveyed in the CSFII, is not clear.

Based on these findings, appropriate target foods for increased consumption in rural areas are fruits and vegetables high in vitamins A and C, and foods high in calcium and iron.

In addition to the effects of poverty on dietary adequacy within the rural population, the other component of the excess risk of dietary inadequacies among the rural poor appears to be a set of "rural factors" related to food consumption, in that the levels of dietary intakes of most nutrients and especially those examined in this study are lower in the rural population compared to urban residents with similar incomes. This unexpected negative "rural effect" upon dietary quality has gone virtually unnoticed to date.

These more generalized rural influences may be cumulative with poverty-related risk factors. Some rural influences, such as home food production (i.e.,gardening), may work to attenuate the effects of poverty but several aspects of the overall food consumption patterns in rural areas are disadvantageous compared to patterns in urban areas[29].

Lower intakes of fruits and vegetables in rural populations have been reported previously [30,31,32,33,34]. The findings presented here confirm lower fruit and vegetable intakes in rural vs. urban populations. Lower consumption of fruits and vegetables in rural areas was reported in the 1972-74 Consumer Expenditure Diary Survey [35] and, more recently, in the 1984 round of the survey [36]. The 1977-78 Nationwide Food Consumption Survey [37,38] reported that intakes of vitamins A and C in rural areas were 80% and 82%, respectively, of intakes among central city residents and that vitamin A intakes did not vary with income (i.e., suggesting rural rather than income differences).

The findings presented here suggest that both socioeconomic factors and rural residence are associated with nutritional risk, although definitive identification of the specific elements of rural residence that predispose the rural poor to dietary inadequacies was beyond the scope of our analyses. As discussed earlier, influences that may disproportionately predispose the rural poor to inadequate intakes of key nutrient sources may include factors related to the degree of urbanization, such as accessibility of supermarkets, availability of transportation, limited selection especially of perishables at accessible food markets, lack of refrigeration, greater seasonal variation in price and availability of produce[39,40].

These findings call attention to the need for development of policy options which will address the critical gaps in nutrition presented in this report. In addition to re-evaluating current nutrition assistance programs for their effectiveness in meeting the distinct needs of the rural poor, the creation of new and

innovative programs specifically targeted to address the unique conditions they face is necessary.

The development of new marketing and distribution strategies which will result in increased access of crucial food groups, especially fruits and vegetables, to the rural poor is called for. These findings demonstrate the urgent need for the creation of a "rural nutrition initiative" which would oversee the development, piloting and implementation of activities enacted to achieve these ends.

Appendices

APPENDIX A

NHANES II

NHANES II was conducted by the National Center for Health Statistics in 1976-1980 to comprehensively assess the health and nutritional status of a large probability sample of the noninstitutionalized U.S. population, using state of the art interview and physical examination procedures[41]. The interview component of NHANES II included extensive demographic and household data, medical history information, and a two part dietary interview. The dietary recall interview was used to assess and quantify intakes of all foods and beverages during the 24 hour period ending at midnight prior to the interview. The food frequency interview assessed the usual consumption of foods in 18 food or beverage groups over the three months prior to the day of the interview.

The physical examination component of NHANES II included diagnoses of chronic diseases as well as selected biochemical and anthropometric measures of nutritional status. A detailed description of the NHANES II methodology[42] and population reference data for the NHANES 24 hour recall[43] and nutritional biochemistries[44] have been published by the National Center for Health Statistics (NCHS)

APPENDIX B

Confidence Intervals (CI) for a ratio of two proportions, e.g., estimates of Relative Risk[1]

Data:

	NUTRIENT OR FOOD INTAKE OR SERUM LEVEL: LOW	ACCEPTABLE	
POOR	x	$N_1 - x$	N_1
NON POOR	$m-x$	$N_2 - (m+x)$	N_2
	m	$N-m$	N

$RR = x/N_1 \ :- \ (m-x)/N_2$

Method: (log RR approximation)

$$\text{LOWER confidence limit} = \exp\left(\log_e(RR) - 1.96 \sqrt{\frac{N_1 - x}{xN_1} + \frac{N_2 - m + x}{(m-x)N_2}}\right)$$

$$\text{UPPER confidence limit} = \exp\left(\log_e(RR) + 1.96 \sqrt{\frac{N_1 - x}{xN_1} + \frac{N_2 - m + x}{(m-x)N_2}}\right)$$

Example: % Vitamin A RDA (rural white males ages 65-74)

	LOW	ACCEPTABLE	
POOR	133	136	269
NOT POOR	100	157	257
	233	293	526

$RR = 133/269 \ :-136/389 = .494 \ :-.389 = 1.3$

$$\text{LOWER CI} = \exp\left(\log_e(1.3) - 1.96 \sqrt{\frac{136}{133 \times 269} + \frac{157}{100 \times 257}}\right)$$

$$= e^{(0.262 - 1.96(0.0038 + 0.0061))}$$

$$= e^{(0.262 - 1.96(.099))}$$

$$= e^{(0.262 - .194)}$$

$$= e^{.068}$$

$$= 1.1$$

$$\text{UPPER CI} = e^{(.262 + .194)}$$

$$= e^{.456}$$

$$= 1.6$$

Thus, in this example, there is 95% confidence that the RR estimate of 1.3 represents a true relative risk in the reference population of between 1.1 and 1.6

[1] Reference:
Katz , Baptista, Azen, and Pike: Obtaining confidence intervals for the risk ratio in cohort studies. Biometrics 1978; 34: 469-474

RELATIVE RISK CALCULATIONS AND EXPLANATION

Lower 95% percent confidence limits on estimates of relative risks for representative subgroup comparisons with small numbers of respondents (using the actual respondent numbers rather than weighted data) were calculated as described in the previous page. If the lower confidence limit on a relative risk is greater than 1.0, the true relative risk in the population sampled is probably greater than one and the inference that the poor are at higher risk relative to the nonpoor is likely to be true in 95% of comparisons made. With the sample sizes that apply to these analyses, relative risks of 1.3 or greater would be unlikely to be observed by chance. Less confidence can be placed in the validity of relative risks of 1.1 vis a vis the reference population. The importance of small levels of excess risk, e.g., 10% or 20%, must be decided on a programmatic basis.

APPENDIX C

DEFINITIONS AND METHODS USED IN CHAPTER III

Variable definitions for the 24 hour recall and nutritional biochemistry variables were retained from the initial analyses. Groupings for food frequency variables took into consideration the qualitative rather than quantitative nature of the NHANES II questionnaire (i.e., the specific amount consumed in a given frequency was not ascertained). The cutoffs for low intake were defined conservatively.

Race was defined as black or white. Other nonwhite respondents were excluded. Rural residents were defined as persons living outside of metropolitan areas. Urban persons were defined as persons living in cities. Persons living in suburban areas (metropolitan areas outside of cities) were not included in these analyses. Poor and nonpoor comparison groups were defined as follows: poor = PIR <1.0; near poor = PIR between 1.0 and 2.0; nonpoor=PIR >2.0. Four age categories (2-19 years; 20-44 years; 45-64 years; 65-74 years) were used to differentiate key life cycle and lifestyle groups to assess age-related differences in susceptibility to low dietary intakes. More than four age groups were used in preliminary analyses but only four age groups could be used for race-sex specific analyses, due to sample size limitations. Women who were pregnant or within three months post-partum women when examined were excluded from the analyses because their dietary data were considered unrepresentative of the usual diets in the general population. Children under age two were excluded from analyses because the lower age limit was 2 years of age for the food frequency data.

Persons with PIR values below 1.0 and between 1.0 and 1.99 were combined into one "poor" category to permit age-sex specific analyses among whites. Among blacks, the numbers of nonpoor respondents was too small to support age, sex, or age-sex specific comparisons between poor and nonpoor in rural areas. (Denominators for some poor vs nonpoor relative risks would have been based on data for only one respondent.) Analyses to estimate proportions of population subgroups with low vs. acceptable intakes were done using the sample weights, which inflate the subgroup sizes representatively to the U.S. population base. However, weighing subgroup data based on extremely small numbers of respondents inflates a very limited amount of information and can be misleading. Thus, analyses of rural poor vs. nonpoor differences among blacks were done with ages and sexes pooled.

APPENDIX D

VEGETABLES AND FRUITS INCLUDED IN CSFII

Citrus Fruits and Juices
Includes oranges and other citrus fruits, orange juice and other citrus juices, mixtures of citrus and other fruit juices, and baby-food citrus juices. Excludes citrus fruit drinks and ades such as lemonade, which are tabulated under beverages.

Tomatoes
Includes raw and cooked tomatoes; tomato juice and soup; catsup, chili sauce, and other tomato sauces; and mixtures such as tomato and corn, tomato and okra, and tomato sandwiches reported as single item.

Dark Green Vegetables
Includes raw and cooked dark-green leafy vegetables such as chard, collards, escarole, mustard and turnip greens, kale and spinach; broccoli; mixtures that are mainly dark-green vegetables, such as spinach souffle and escarole soup; baby-food spinach.

Deep Yellow Vegetables
Raw and cooked deep-yellow or orange vegetables such as carrots, pumpkin, winter squash, and sweet potatoes; mixtures that are mainly deep-yellow vegetables, such as peas and carrots and sweet potato casserole; and baby-food carrots, squash, and sweet potatoes.

APPENDIX E

INTERPRETATION OF MEAN INTAKES

Table A and figures A and B display the proportions of the low-income rural population who consumed at least 100% of the RDA for vitamins A and C, Calcium and Iron and the mean intake of these nutrients for those groups.

Table A: Percent of the Population with Intakes Above 100% of the RDA

	CHILDREN	WOMEN
Vitamin A	71.1	35.9
Vitamin C	77.7	39.1
Calcium	34.6	15.3
Iron	20.3	3.2

* Four nonconsecutive days, 1985.
Source: USDA; NFCS, CSFII, Report No. 85-4

Table B: Mean Intakes vs. Percent of the Population with Intakes Above 100% of the RDA

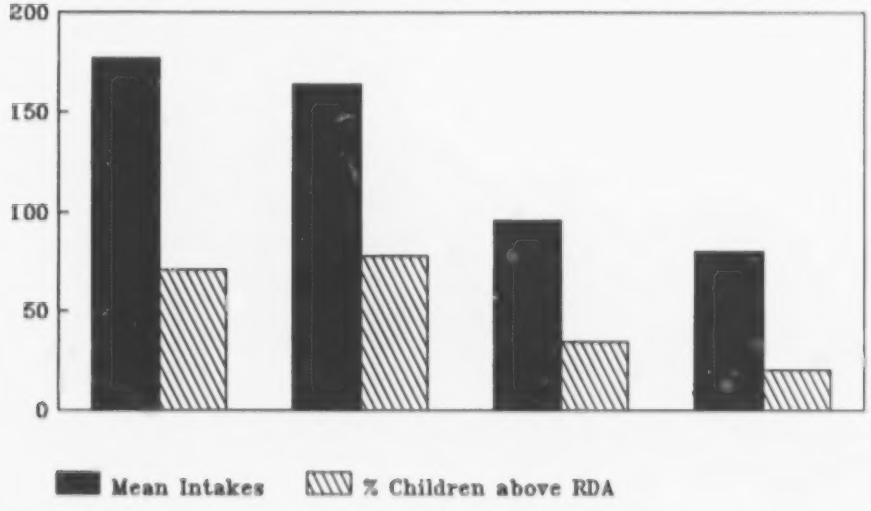
	Mean Intake as % RDA*		% Individuals with Intakes Above 100% RDA**	
	Children	Women	Children	Women
Vitamin A	177	108	71.1	35.9
Vitamin C	164	102	77.7	39.1
Calcium	96	62	34.6	15.3
Iron	80	54	20.3	3.2

* Mean per individual per day, four nonconsecutive days, 1985
** Four nonconsecutive days, 1985
Source: USDA: NFCS, CSFII Report No. 85-4

Comparison of these data demonstrates the wide gap between the two types of data. For example, while the mean intake for vitamin C among low-income children was 164% of the RDA, nearly a quarter (22.3%) of these children had intakes below 100% of their RDA. For vitamin A the difference is larger -- a mean intake of 177% of the RDA but 28.9% with intakes below the RDA.

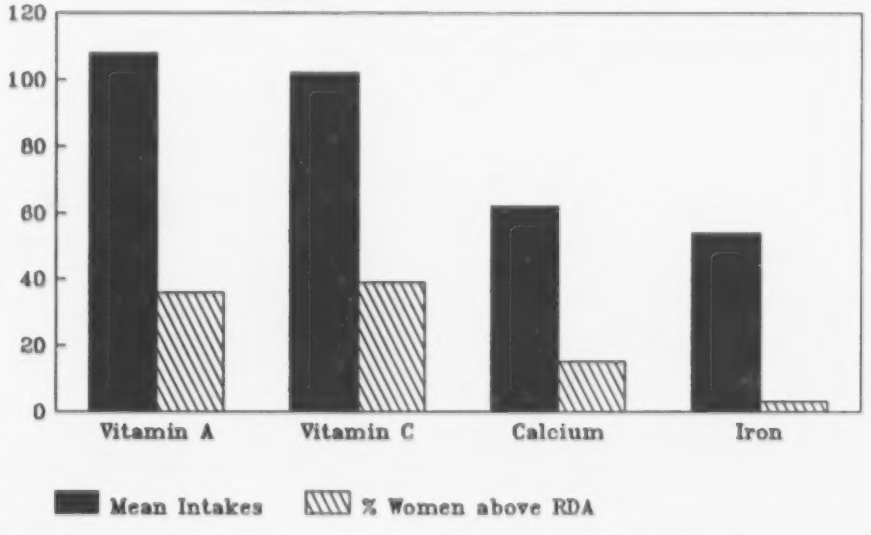
As these data display, while mean vitamin A intakes for low-income women were 108% of the RDA, only one out of three (35.9%)

Fig. A: Mean Intakes vs Percent of the Population Above the RDA (Children)



Source: USDA; NFCS, CSFII
Report No. 85-4

Fig. B: Mean Intakes vs Percent of the Population Above the RDA (Women)



Source: USDA; NFCS, CSFII
Report No. 85-4

actually had vitamin A intakes of 100% or more of the RDA. Similar results can be found for each of the nutrients examined.

Although means are the principal statistic used to describe and evaluate the adequacy of dietary intakes among populations, as these data demonstrate, they have serious limitations in this role. Generally, when used to assess the adequacy of nutritional intake among population groups, means result in the often inaccurate impression that the majority of the population consume adequate intake when in fact, large proportions may be consuming grossly inadequate levels. Means conceal the wide variation of intakes within the population in a manner which over-estimates the intake of those consuming low levels. This is the result of the disproportionately large influence high intakes exert upon the mean intake for that nutrient.

For example, if two out of 10 people being included in a nutrition survey consume a cup of carrots, or a sweet potato or any other vitamin A rich food along with the balance of their day's intake on the day they are interviewed, their intake of vitamin A for that day would be 2-3 times the RDA. Even if the remaining eight persons consumed only between 50 and 70 percent of their RDA for vitamin A during the day of the intake, the group average (mean) would be approximately 100 Percent of the RDA (give or take a few percent.) The same is true of the other nutrients as well.

Based on the under-estimation of the proportion of the population at risk which often results from the misinterpretation of group mean intakes, primary reliance on this statistic is cautioned against. Rather, greater emphasis on median intakes, and other percentile measures will result in a more realistic assessment of the population at risk.

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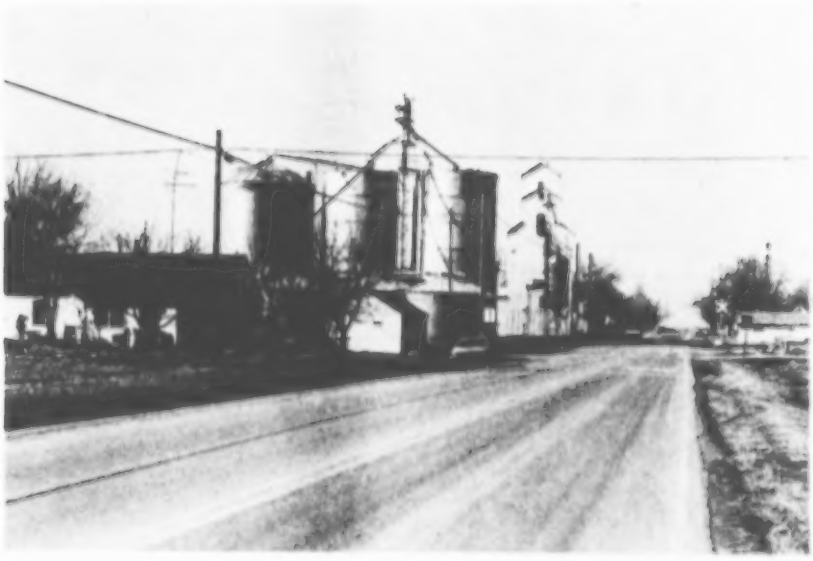
Section II

Food Program Analyses



Chapter VI

Introduction: Section II

One of the goals of this year's research was to identify the primary determinants of low rural participation in food assistance programs. Low participation in these programs exacerbates the nutrition and food access problems outlined in the first section of this report.

This section of the report examines four critical programs, focusing on the significance of these programs to the rural poor. The four programs discussed in the report are 1) The Summer Food Service Program for Children; 2) The Food Stamp Program; 3) The Temporary Emergency Food Assistance Program (TEFAP) and 4) Emergency Feeding--Food banks. These programs were chosen both for their importance to the rural poor and the disproportionate underutilization of these programs by this population.

The food stamp program was a logical choice for inclusion in this report as it is the largest and most important of the federal food assistance programs. In addition, our previous work in this area has shown that the rural poor face unique barriers to participation in the food stamp program.

We then focused on two particularly timely issues for the rural poor population; child nutrition and emergency food. America's children currently comprise the nation's largest and most deeply impoverished age group. Rural children are a particularly high risk population with 18.7% of rural children living below the poverty threshold according to 1980 census data compared to 15% of urban children. (By 1986, approximately one in five children nationally were poor).

In our preliminary examination of child nutrition programs, the summer food service program for children stood out as a highly underutilized program, particularly in rural areas. The relatively low level of interest and understanding of this program led to its inclusion in this report.

Our interest in examining emergency feeding distribution in rural areas naturally led us to the major programs in this area: TEFAP and the Second Harvest food bank network.

A summary of each program analysis is presented below:

I. THE SUMMER FOOD SERVICE PROGRAM FOR CHILDREN
This section analyzes how and why the summer feeding program falls far short of its mandate as a supplement to the school year programs, focusing on a particularly underserved and at risk population--the rural children of America.

Participation

Current participation levels in the summer feeding program are a fraction of those in the more widely supported school lunch program. Nationally, more than 10.9 million children receive free or reduced price school lunches compared to approximately 1.46 million children who receive summer meals.

Further, participation has plummeted during the past five years due to legislative cuts and revisions in the program.

Rural Participation Survey: Key Findings
We surveyed state summer feeding program offices on participation trends in rural regions of the country. Data from this survey demonstrates both the overall low participation rates in rural and urban areas and the extreme disparities between them. Further analysis shows both the strikingly small proportion of low-income children utilizing the summer food program nationally and the gap between rural and urban participants. Overall, for the states included in the study (43 including the District of Columbia), only **9.6%** of America's poor children were served by the summer feeding program, **11.8%** of the metropolitan poor were served by the program and **5%** of the nonmetropolitan poor. (Appendix I of the report presents a detailed explanation of data methodology).

Barriers and Recommendations
The data presentation is followed by a discussion of the causes of the disparities in participation between rural and urban areas. This section is based on discussions with child nutrition advocates and experts and informal phone interviews with state summer feeding program directors throughout the country.

We found that the critical barriers to participation by rural children in the summer food service program were:

1) Exclusion of private nonprofit sponsors from the program

Recommendation: Restore Private Nonprofit Sponsorship.
Public Voice recommends limited restoration of private nonprofit sponsorship to both rural and urban areas. We recommend that restrictions be implemented limiting the size of the sponsors. A limit on sponsor size will restore nonprofit sponsorship in

virtually all rural areas where programs are generally smaller, and may also positively affect urban children in similar situations.

2) Lack of Outreach Funding

Recommendation: Mandate Summer Food Program Outreach Efforts Including Sponsor Outreach in Rural Areas.
Public Voice strongly urges the U.S. Department of Agriculture (USDA) to back up its own directive for "mandatory outreach efforts to needy areas" with funding for this purpose. We recommend general outreach in all program areas and specific sponsor outreach efforts in rural areas.

3) Insufficient Reimbursement Rates for Rural Areas

Recommendation: Increase Funding Reimbursement for Rural Areas.
Public Voice recommends that in order to reach adequate, more equitable funding levels, further study is needed to determine what is appropriate. We recommend that USDA update its analysis of operating costs in the summer feeding program and that the operating costs necessary to provide the program to very rural areas be examined particularly closely.

4) Overly Stringent Eligibility Rules

Recommendation: Restore the 1/3 Eligibility Threshold.
Public Voice recommends that the eligibility threshold be restored to 1/3 rather than 1/2 of an area's children eligible for free and reduced price school meals. The lowered limit will be especially crucial for rural programs where needy children are more spread out geographically and less likely than inner city areas to form a concentrated pocket of poverty (50% or more).

II. THE FOOD STAMP PROGRAM
The purpose of this section is to identify and explain critical barriers to rural participation in the food stamp program through a compilation of findings from key studies and reports on the subject. The barriers presented in this report represent a consensus among advocates and researchers, both private and public, that these are the most critical obstacles to reaching increased numbers of food stamp eligibles with the program.

The Problem
Although millions of needy Americans receive food stamp benefits, millions more are eligible but do not receive food stamps. Significant gaps in program coverage have been documented in a number of studies and reports. In recent years, in fact, food stamp participation has actually declined while poverty has risen.

Significance to the Rural Poor

This study focuses on a particularly underserved population--the rural poor. Since 1985, Public Voice has examined the nutritional and food assistance needs of the rural poor, finding that nutritional deficiencies prevalent among this population are exacerbated by low participation in the food assistance programs designed to serve them.

Analysis of Key Barriers

The seven key barriers discussed in the report are;

- o Physical Access Barriers
- o Asset Restrictions
- o Administrative Barriers
- o Stigma/Attitudinal Barriers
- o Informational Barriers/Outreach
- o Barriers Unique to the Elderly
- o Food Stamp/ Public Assistance Programs Link

Summary of Findings

A summary of the findings in each of the seven areas is presented below. Recommendations for dismantling these barriers are included at the end of each section.

Physical Access Barriers

Significance to the Rural Poor

Rural recipients often face long trips to food stamp offices over difficult roads without adequate public transportation available. Physical access problems are especially severe for the rural elderly population.

Key Recommendations

o Establish telephone or home interview certification for households in areas with substantial transportation difficulties.

o Expand satellite offices and provide itinerant workers. These services experienced severe cuts during the past five years.

o Reopen all program offices and sub-offices which were closed in recent years in order to ensure that each rural county has at least one program office.

Asset Restrictions

Significance to the Rural Poor

The vehicle asset limits are particularly restrictive in rural areas where vehicles are sorely needed for hauling water and

wood. These restrictions affect the "new rural poor" such as farmers, discouraging many of them from applying for the program.

Key Recommendations

o Allow households in project areas with substantial transportation difficulties to own one non-luxury vehicle which is not counted toward the asset limit.

o Grant waivers exempting individuals who must haul their water or fuel to their home from the current value cap allowed for a vehicle.

o Support current proposals before Congress to alleviate existing barriers to participation among farmers.

Administrative Barriers

The five main administrative barriers discussed in the report are;

- o Complex application forms
- o Frequent legislative and regulatory changes in the program
- o Restrictive monthly reporting and retrospective budgeting requirements (mrrb)
- o Error rate sanction system
- o Issuance Methods

Key Recommendations

o Require states to simplify and shorten application forms and procedures.

o Implement at least one state-wide toll-free food stamp hotline in each state.

o Cease pressuring states to expand the proportion of cases required to be on monthly reporting.

o Make direct mail issuance available for all rural participants.

o Require all state agencies to establish and follow standards for the maximum number of cases that an eligibility worker can handle while providing benefits promptly and accurately to eligible households.

Stigma/Attitudinal Barriers

Significance to the Rural Poor

"Small town pride" keeps many rural individuals away from food stamp offices. A negative stigma is particularly prevalent among the "new poor" including farmers.

Key Recommendations

o Implement public education programs on the importance of the food stamp program, aimed not only at food stamp recipients but also at the community at large.

Informational Barriers/Outreach

Significance to the Rural Poor

The elderly and rural populations are most vulnerable to gaps in information about food stamps.

Key Recommendations

o Implement vigorous outreach activities, targeted to those least served and in greatest need.

Barriers Unique to the Elderly

Significance to the Rural Poor

The rural elderly face particular difficulties in accessing the food stamp program. Benefit levels nationally are disproportionately low among the elderly population.

Key Recommendations

o Monitor federal and state program offices to ensure that the elderly are advised of their rights to in-home or phone interviews and of their eligibility for medical expense deductions.

o Continue pilot testing of cash-out projects for the elderly.

o Raise the minimum food stamp benefit to $20 per month and index that amount to annual increases in the Consumer Price Index.

Food Stamps/Public Assistance Programs Link

Significance to the Rural Poor

A number of studies have shown a clear link between participation in other public assistance programs and participation in the food stamp program. The link between food stamps and other social welfare programs is especially problematic in rural areas where program participation is generally lower than in urban areas.

Key Recommendations

o "Welfare simplification" proposals must take into account lower program participation rates in rural areas. The rural poor, less likely to receive benefits, are also less likely to benefit from coordination of program benefit distributions.

o Require USDA to develop standards to ensure simplicity and understandability in application forms, and develop and distribute to the states a model form covering food stamps, AFDC, Medicaid, General Assistance and energy assistance programs.

III. THE TEMPORARY EMERGENCY FOOD ASSISTANCE PROGRAM (TEFAP)
This section examines the role of TEFAP in supplementing the diets of needy Americans, focusing particularly on program utilization in rural areas. These issues are especially timely given the Administration's November announcement that due to substantial decreases in commodity surpluses, the amount of commodities available under TEFAP in 1988 will likely only be half of what it was in 1987.

Participation
In October 1986, according to a study by the Food and Nutrition Service (FNS), approximately 5 million households or 15 million persons received TEFAP commodities. 41% of TEFAP recipients considered the program as a regular source of food.

Significance to the Rural Poor
FNS's findings underline the critical importance of the program in rural areas. Their study found that approximately half of the TEFAP distribution sites were located in non-urban areas and 55% of all households which received commodities from the program were served at non-urban sites.

TEFAP Survey
Public Voice conducted an informal phone survey with a representative sample of TEFAP directors, including one from each of the five main regions of the country; the West, Midwest, Deep South, Southeast and Northeast. We questioned each Director on rural participation levels in their states and on the characteristics of the program which, unlike the other food assistance programs, have led to more equitable distribution of TEFAP commodities between rural and urban populations.

Key Findings
- o The rural poor and near-poor depend heavily on TEFAP, often as their sole source of food assistance.

- o Any negative stigma associated with TEFAP among the rural population appears to be much less than with other assistance programs such as food stamps.

Barriers to Rural Participation

The survey found that the major barriers to rural participation were:

- Lack of adequate storage facilities
- The temporary nature of the program which prohibits adequate investment in storage and warehouse facilities.
- The greater distances involved in distributing commodities to rural areas.
- The lack of a higher reimbursement rate for rural sites.

Recommendations

- **Significantly improve storage facilities, particularly in warehouses that can accommodate perishable goods.**
- **Increase transportation funding.**
- **Increase the reimbursement rate for rural programs to help compensate for the greater costs associated with program operation in rural areas.**

Most importantly, we call on Congress and the Administration to understand the depth of the need throughout the country for emergency food provisions such as those provided by TEFAP. Greater government commitment is needed to maintain TEFAP and to help alleviate demand for emergency food by improving coverage of other food assistance programs. Expansions and improvements in the programs such as food stamps set up to meet the long-term food assistance needs of the poor are critical.

IV. FOOD BANKS

This section focuses on the major private source of emergency food throughout the country in both urban and rural areas; the Second Harvest Food Bank Network. Second Harvest is the second largest supplier of food for emergency purposes, the largest being the federal government.

Significance to the Rural Poor

Despite the Second Harvest food bank network's efforts to facilitate emergency food distribution to rural areas, they continue to encounter difficulties in meeting the goal of more equitable food distribution.

Rural Participation Survey

Public Voice surveyed the 82 certified Second Harvest food banks on rural issues, asking them specifically what problems they have encountered in meeting the needs of rural areas and what recommendations they have for improving emergency food services to unserved rural areas.

Summary of Findings

A summary of the results of our survey of Second Harvest food banks is presented below. 66 of the 82 food bank directors responded to the questionnaire:

Key Barriers to Emergency Food Distribution in Rural Areas

The most critical barriers according to the survey respondents were 1) transportation costs; 2) excessive distances; 3) lack of vehicles for transport and 4) lack of storage facilities.

Recommendations for Improving Service to Rural Areas

Highlights of the recommendations put forth by the survey respondents are listed below:

- **Increase funding for food banks in order to improve services.**
- **In order to meet the needs of rural areas and unless funding is expanded, the food bank network may have to redistribute resources from urban to rural areas.**
- **There is a need before expanding services to increase the amount and variety of food available.**
- **The private sector cannot carry the burden alone. Public assistance programs must be expanded and improved to help meet the need.**

Chapter VII

The Summer Food Service Program for Children

INTRODUCTION

According to the latest statistics released by the Census Bureau in July 1987, America's children comprise the nation's largest and most deeply impoverished age group. In 1986, 12.9 million (approximately one in five) American children lived in poverty. The percentage was even higher for children under age six at 22.1% below the poverty line. Minority children were at greatest risk--45.6% of black children under age six were poor in 1986 and 40.7% of hispanic children under age six were poor in 1986.[1]

Rural children were at even greater risk. According to 1980 census data, 15% of urban children under 18 years old lived below the poverty line while 18.7% of rural children were poor. Among school-aged children, 14.2% of urban children were poor and 18.2% of rural children fell below poverty.[2]

Senator Daniel Patrick Moynihan (D-NY) noted in a recent article that "as children are disproportionately poor, they are disproportionately hungry...Children generally suffer the most severe and long-term consequences of hunger and malnutrition when their bodies are deprived during development."[3] The scientific literature abounds with empirical evidence of this direct link between poverty and malnutrition and the negative consequences of malnutrition, even when only marginal, upon a child's social and educational development. [4]

A study by Public Voice found that rural poor children were almost three times as likely as their urban counterparts to be growth-stunted.[5] This indicator (low height for age or growth stunting) is widely used in diagnosing nutritional status in children.

The school feeding programs represent the only hope for an adequate diet for many impoverished children. Often, school meals are the only full meals these children will receive all day. The school lunch program, established in 1946, and the less well-attended school breakfast program, established in 1966, reach a great many of these needy children.[6] The importance of the school feeding programs to children's nutritional status has been substantiated by numerous studies. Such research has consistently demonstrated that school lunches contribute between one-third and one-half of the total daily nutritional intake of low-income children.

These school year feeding programs alone, however, are not sufficient to meet the year-round nutritional needs of our nation's children. Operating only during the nine months when school is in session, these programs leave a serious gap during the summer months. The summer food service program for children was designed to help close that gap in meeting the year-round nutritional needs of low-income, needy children.

Sadly, and for a variety of reasons, the summer program falls far short of its mandate as a supplement to the school year programs. While this problem is pervasive throughout the country, this report will focus on a particularly underserved and at risk population--the rural children of America.

As will be detailed throughout this paper, the summer feeding program for children has evolved as more of an urban program, leaving disproportionate numbers of rural children unserved during the summer months. Perhaps even more significant, participation has declined sharply in both urban and rural areas during the 1980's due to both massive cuts in the program and to legislative obstacles enacted during the first two years of the Reagan Administration.

This report will analyze general participation trends in the summer food service program, focusing more specifically on rural participation. The key barriers preventing greater participation in rural areas will be analyzed followed by policy recommendations targeted at dismantling these barriers.

INTRODUCTION TO THE PROGRAM

The Summer Food Service Program for Children (SFSP) is a federally funded program to provide meals to children in impoverished areas during the summer months when school is not in session. SFSP was established in May 1968 (P.L. 90-32) as part of the Special Food Service Program for Children. In 1975 (P.L. 94-105), the summer feeding and child care components of the program were divided.[7]

Local sponsors operate the program under the supervision of either a regional Department of Agriculture Food and Nutrition Service (FNS) office or a state agency office, ordinarily the child nutrition division within the state department of education. These supervising agencies are responsible for approving local sponsors, passing on federal subsidies and overseeing local operations.[8] Sponsorship of a summer feeding program is limited to public and private non-profit school food authorities, local municipal or county government and private or public nonprofit residential summer camps serving needy children.

The program is restricted; 1) geographically to areas in which "poor economic conditions" are determined to exist and 2) to

sites serving a high proportion of poor children. At least one half of the children must be eligible for free or reduced price school meals under the School Lunch and School Breakfast programs in order for an area or site to be considered "poor." The geographic area under the "geographic eligibility" criteria can be an entire county, school district or the area covered by one school. "Enrollment or site eligibility" criteria can initially be based on projected attendance. Later, the actual attendance data is reviewed to confirm that at least 50% of the children attending the summer feeding site are eligible for free or reduced price school meals.

Once an area or project site qualifies, any child there age 18 and under may receive meals. All meals are provided free to all program participants with one critical exception. In programs operated by residential summer camps, meals are served free only to children who qualify for free or reduced price school lunches (from families with incomes below 185 percent of the federal poverty level), and federal subsidies are provided only for those meals.

No more than two meals per day are allowed (lunch, and either breakfast or a snack supplement), except in programs primarily serving migrant farmworker children and in overnight, residential camps where up to four meals may be served each day. All meals in migrant programs may be subsidized, whereas only those meals served in residential camps to children with valid applications (i.e. eligible for free and reduced price school meals) may be subsidized.

PARTICIPATION

Despite the higher numbers of children living in poverty today, the higher proportion in poverty with single parents who are likely to be away from home during the day, and the already low levels of participation in the summer feeding program, participation has plummeted during the past five years. Current participation levels are a fraction of those in the more widely supported school lunch program. Table 1 displays the significant gaps which exist in each state between participation levels in the free and reduced price school lunch and summer feeding programs. The SFSP totals listed in the table are for the states in our survey only. Nationally, more than 10.9 million children receive free or reduced price school lunches compared to approximately 1.46 million children who receive summer meals.[9]

Recent legislation has cut deeply into these already low participation levels in the summer food service program for children. Most critically, in legislation enacted in August 1981 (P.L. 97-35), Congress limited the types of organizations eligible to sponsor summer feeding programs by excluding private nonprofit sponsors other than schools and residential camps. The same

Table 1: Participation Levels in Free & Reduced Price School Lunch vs. The Summer Food Service Program for Children

	Lunch/ Free & Reduced Price (1)	Summer Food Service Program (2)
ALABAMA	289271	43883
ALASKA (1987)	17677	79
ARKANSAS	142551	1600
CALIFORNIA (1987)	1203188	217176
COLORADO	105295	9954
CONNECTICUT	72114	17029
DELAWARE	19190	12170
DISTRICT COLUMBIA	37020	7106
FLORIDA	475091	84830
HAWAII	47879	8339
IDAHO	46720	910
ILLINOIS	471539	52431
INDIANA	159196	18976
IOWA	107709	5648
KANSAS	90631	4934
KENTUCKY	223634	18000
LOUISIANA	376897	36067
MAINE	45237	1078
MARYLAND	132460	23437
MASSACHUSETTS	154116	15611
MICHIGAN	297484	52999
MINNESOTA	135071	13647
MISSISSIPPI	281496	40349
MISSOURI	200138	10306
MONTANA	31811	6680
NEBRASKA (1987)	60131	3213
NEVADA	19846	670
NEW HAMPSHIRE	18414	1304
NEW JERSEY	215124	56434
NEW MEXICO (JULY)	107647	13573
NEW YORK	832122	281915
NO.CAROLINA (JULY)	325914	32761
NO. DAKOTA (1987)	26887	1851
OHIO	353199	25132
OKLAHOMA	156811	5281
OREGON (1987)	93212	10172
PENNSYLVANIA	359299	81833
RHODE ISLAND	27177	7705
TEXAS	957661	37539
VERMONT	15368	266
WASHINGTON (1987)	143024	10541
WEST VIRGINIA	114343	12385
WISCONSIN	143989	9541
WYOMING	16018	55
TOTAL	9149601	1295410

(1) Average daily lunches served in FY 1987. Data published by the Food Research and Action Center. Based in part on preliminary data submitted by states to FNS.

(2) Data collected by Public Voice from state summer food service program offices. All data is 1986 final unless noted as from the month of July only. See appendix I for detailed explanation.

legislation also raised the income eligibility threshold from one-third to one-half of the children in the geographic area or site required to be eligible for free or reduced price meals. Overall, these legislative changes targeted at cutting fraud in the program have resulted in significant reductions in the program's ability to serve needy children.

The President's own Task Force on Food Assistance found the declines in participation in the summer program noteworthy. In their final report released in January 1984, the Task Force pointed out that as a result of the 1981 legislative changes, the number of summer feeding sites declined between 1981 and 1983 by 6,000--this represented a 30 percent decrease in the number of sites and directly resulted in a 22 percent decrease in the number of meals served.[10] Overall, the number of children served by the program declined since 1981 by over 30%, from 2.2 million to only approximately 1.5 million.[11]

RURAL PARTICIPATION STUDY

METHODS

In our initial attempts to gather a uniform set of summer feeding participation data, we found the data routinely collected by the program's supervising agency, the U.S. Department of Agriculture's Food and Nutrition Service (FNS) to be inadequate for assessing rural participation. As a result of their reimbursement system's record-keeping needs, FNS's most detailed participation records combine data from rural sites with data from all self-preparation sites (sites in which food is prepared on premises), both urban and rural. The reason is that both self-prep and rural sites are reimbursed at the same rate for administrative costs.

As an alternative, we attempted to access county level participation data from FNS' records. We could then compare nonmetropolitan county to metropolitan county rates in each state as well as nationally. Again, FNS was unable to provide this information. According to FNS staff, county level program data are not routinely available. Rather, only state level data are required of states and therefore routinely available.

Given these limitations in the quality and availability of data, we decided to survey each state's summer feeding program office directly. Addresses of state and regional program offices were obtained from the Food and Nutrition Service in Washington, D.C. and from regional offices when necessary. A data request was sent to the appropriate state or regional office with responsibility for administering the program. (The majority of states administer their own programs. In a number of states, however, including New York, California and Georgia, programs are administered by regional office of the Food and Nutrition Service).

A second survey letter was sent to all states clarifying several points which were problematic (as indicated by responses to the first mailing) and again urging response to the survey. Basically, states were asked to provide us with the following information;

1) Average daily participation data (ADP) from 1986 (the most recent year that final data was available for most states) for the state as a whole and for the state's metropolitan areas. We were then able to subtract the metropolitan total from the state total to arrive at the nonmetropolitan total.

2) A listing of the counties in the state which had a summer feeding program during the most current year (1987).

The majority of program offices received follow-up phone calls again urging response and in some cases clarification of the data which they had sent us. Additional calls were placed to several state and regional summer feeding program administrators in which informal discussions were held regarding their perceptions of the adequacy of the program in serving their respective states' rural areas. (An explanation of the primary limitations in the resulting data is provided in Appendix I).

DATA PRESENTATION

Data from the 43 states which responded to the survey with acceptable data are presented in Tables 2 through 4.[12] In addition, maps illustrating served and unserved metropolitan and nonmetropolitan counties are presented in Figures 2 through 5. These data demonstrate both the overall low participation rates in rural and urban areas, and the extreme disparities between them.

Table 2 displays the results of our survey of state and regional summer food service program offices. All data is final 1986 participation data unless otherwise indicated. Participation data from the following states were unavailable and therefore not included in the analysis: Arizona, Georgia, New York, South Carolina, South Dakota, Tennessee, Utah, and Virginia.

Participation data from the 43 states included in this analysis reveal that the summer feeding programs operating in those states served meals to just over 1 million children on an average day of operation. Of these one million children, 847,265 or approximately 84% were served at programs located in metropolitan counties and only 16% were provided in nonmetropolitan counties.[13] (See Appendix I for further detail and definitions of metropolitan and nonmetropolitan counties).

Table 2: The Summer Food Service Program for Children: Urban vs. Rural Participation (1)

STATE	Summer Feeding Total	Summer Feeding Urban Counties(2)	Summer Feeding Rural Counties(2)
ALABAMA	43883	27390	16493
ALASKA (1987)	79	30	49
ARKANSAS	1600	1119	481
CALIFORNIA (1987)	217176	210509	6667
COLORADO	9954	8898	1056
CONNECTICUT	17029	16548	481
DELAWARE	12170	6519	5651
DISTRICT COLUMBIA	7106	7106	0
FLORIDA	84830	81610	3220
HAWAII	8339	8339	0
IDAHO	910	42	868
ILLINOIS	52431	51409	1022
INDIANA	18976	18278	698
IOWA	5648	4832	816
KANSAS	4934	4494	440
KENTUCKY	18000	12384	5616
LOUISIANA	36067	20208	15859
MAINE	1078	731	347
MARYLAND	23437	22443	994
MASSACHUSETTS	15611	15445	166
MICHIGAN	52999	44047	8952
MINNESOTA	13647	10719	2928
MISSISSIPPI	40349	7420	32929
MISSOURI	10306	8357	1949
MONTATA	6680	242	6438
NEBRASKA (1987)	3213	2169	1044
NEVADA	670	358	312
NEW HAMPSHIRE	1304	834	470
NEW JERSEY	56434	56434	0
NEW MEXICO (JULY)	13573	9029	4544
NO.CAROLINA (JULY)	32761	14829	17932
NO. DAKOTA (1987)	1851	296	1555
OHIO	25132	22102	3030
OKLAHOMA	5281	2354	2927
OREGON (1987)	10172	9154	1018
PENNSYLVANIA	81833	78529	3304
RHODE ISLAND	7705	7531	174
TEXAS	37539	32372	5167
VERMONT	266	0	266
WASHINGTON (1987)	10541	9986	555
WEST VIRGINIA	12385	4166	8219
WISCONSIN	9541	8003	1538
WYOMING	55	0	55
TOTAL	1013495	847265	166230

(1) Data collected by Public Voice from state summer food services program offices. All data is 1986 final unless noted as 1987. All data is average from the entire summer unless noted as from the month of July only. See appendix I for detailed explanation.

(2) The terms metropolitan/nonmetropolitan and urban/rural area used interchangeably throughout the report. All are based on the Bureau of Census definitions of metro and nonmetro areas. See appendix I for detailed explanation.

It is important to note that the nonmetropolitan total is in all likelihood an overestimation of program utilization in nonmetropolitan counties. In many cases, the children participating in a summer feeding program in a nonmetropolitan county do not reside in that particular county. This situation occurs most frequently when a summer feeding site in a nonmetropolitan area is actually a residential camp serving urban children--a very common situation.

Virtually every state director with whom we spoke pointed out this issue and cautioned us of the overestimation in nonmetropolitan participation which results. Massachusetts, for example, emphasized that a number of nonmetropolitan sites serve inner-city children who are transported from the cities in conjunction with a camp recreation program. Minnesota stressed that most of the camp sites operating in rural areas in that state serve primarily urban children. In addition, migrant sites, often located in rural areas, serve migrant farmworker children who temporarily reside in the area during periods of farmwork demand (heaviest during the summer months) **and not necessarily local rural children.**

The metropolitan/nonmetropolitan distinction therefore can be misleading. In most cases, data collected in this manner leads to an overestimation of nonmetro participation. (These issues are addressed in greater depth in Appendix I).

A final factor influencing the data in Table 2 is the exclusion of data from New York State. Data by urbanization (metro/nonmetro) for the state were not made available to us. However, because of the unusual size of the state's program (the largest in the nation with a 1987 Average Daily Participation of just over 281,000), we thought it merited brief discussion in this report.

Officials in the New York office noted that the program in their state is almost entirely an urban program. The New York City Board of Education receives about 50% of total program funding. When the entire metropolitan area is included, "70% or more" of the funds provided by FNS for the entire state's summer feeding program are used. And the majority of the balance is received by the other large urban areas in the state (Buffalo, Rochester, Albany, Binghampton and Syracuse). According to officials in the New York office, the program is "all set up in cities, but not in more dispersed rural counties." They further noted that most of the rural sites they do have serve urban kids through residential camps.[14]

Table 3 presents comparisons of the summer food service program data in rural and urban areas with child poverty data. The table approximates the relative percentages of low-income children served in rural and urban areas and is not intended to be an

Table 3: Summer Feeding Program Participation and Child Poverty

State	Summer Feeding Total ADP	Total Poor Children (1)	% Served	Summer Feeding Urban ADP	Urban Poor Children (1)	% Served Urban	Summer Feeding Rural ADP	Rural Poor Children (1)	% Served Rural
ALABAMA	43883	352175	12.5%	27390	193990	14.1%	16493	158185	10.4%
ALASKA (1987)	79	21399	0.4%	30	6456	0.5%	49	14943	0.3%
ARKANSAS	1600	208012	0.8%	1119	69543	1.6%	481	138469	0.3%
CALIFORNIA (1987)	217176	1287747	16.9%	210509	1212567	17.4%	6667	75180	8.9%
COLORADO	9954	126903	7.8%	8898	94404	9.4%	1056	32499	3.2%
CONNECTICUT	17029	118969	14.3%	16548	108062	15.3%	481	10907	4.4%
DELAWARE	12170	33696	36.1%	6519	19672	33.1%	5651	14024	40.3%
DISTRICT COLUMBIA	7106	46135	15.4%	7106	46135	15.4%	0	0	0.0%
FLORIDA	84830	571734	14.8%	81610	474640	17.2%	3220	97094	3.3%
HAWAII	8339	51969	16.0%	8339	40408	20.6%	0	11561	0.0%
IDAHO	910	62582	1.5%	42	7186	0.6%	868	55396	1.6%
ILLINOIS	52431	597152	8.8%	51409	501910	10.2%	1022	95242	1.1%
INDIANA	18976	258104	7.4%	18278	173382	10.5%	698	84722	0.8%
IOWA	5648	127942	4.4%	4832	43129	11.2%	816	84813	1.0%
KANSAS	4934	103089	4.8%	4494	43258	10.4%	440	59831	0.7%
KENTUCKY	18000	296879	6.1%	12384	95319	13.0%	5616	201560	2.8%
LOUISIANA	36067	385959	9.3%	20208	219103	9.2%	15859	166856	9.5%
MAINE	1078	72795	1.5%	731	18157	4.0%	347	54638	0.6%
MARYLAND	23437	188551	12.4%	22443	163868	13.7%	994	24683	4.0%
MASSACHUSETTS	15611	254673	6.1%	15445	219932	7.0%	166	34741	0.5%
MICHIGAN	52999	470119	11.3%	44047	380625	11.6%	8952	89494	10.0%
MINNESOTA	13647	161139	8.5%	10719	77388	13.9%	2928	83751	3.5%
MISSISSIPPI	40349	310868	13.0%	7420	60044	12.4%	32929	250824	13.1%
MISSOURI	10306	264842	3.9%	8357	143803	5.8%	1949	121039	1.6%
MONTATA	6680	44177	15.1%	242	8566	2.8%	6438	35611	18.1%
NEBRASKA (1987)	3213	74199	4.3%	2169	27204	8.0%	1044	46995	2.2%
NEVADA	670	30538	2.2%	358	24228	1.5%	312	6310	4.9%
NEW HAMPSHIRE	1304	35172	3.7%	834	15615	5.3%	470	19557	2.4%
NEW JERSEY	56434	354270	15.9%	56434	331613	17.0%	0	22657	0.0%
NEW MEXICO (JULY)	13573	121291	11.2%	9029	43075	21.0%	4544	78216	5.8%
NO.CAROLINA (JULY)	32761	413500	7.9%	14829	174326	8.5%	17932	239174	7.5%
NO. DAKOTA (1987)	1851	38288	4.8%	296	8921	3.3%	1555	29367	5.3%
OHIO	25132	520149	4.8%	22102	402493	5.5%	3030	117656	2.6%
OKLAHOMA	5281	180688	2.9%	2354	90484	2.6%	2927	90204	3.2%
OREGON (1987)	10172	115510	8.8%	9154	68052	13.5%	1018	47458	2.1%
PENNSYLVANIA	81833	565496	14.5%	78529	452060	17.4%	3304	113436	2.9%
RHODE ISLAND	7705	43831	17.6%	7531	39992	18.8%	174	3839	4.5%
TEXAS	37539	1048612	3.6%	32372	795942	4.1%	5167	252670	2.0%
VERMONT	266	29380	0.9%	0	4322	0.0%	266	25058	1.1%
WASHINGTON (1987)	10541	174117	6.1%	9986	130488	7.7%	555	43629	1.3%
WEST VIRGINIA	12385	136267	9.1%	4166	37644	11.1%	8219	98623	8.3%
WISCONSIN	9541	191874	5.0%	8003	116211	6.9%	1538	75663	2.0%
WYOMING	55	16360	0.3%	0	1646	0.0%	55	14714	0.4%
TOTAL	1013495	10507152	9.6%	847265	7185863	11.8%	166230	3321289	5.0%

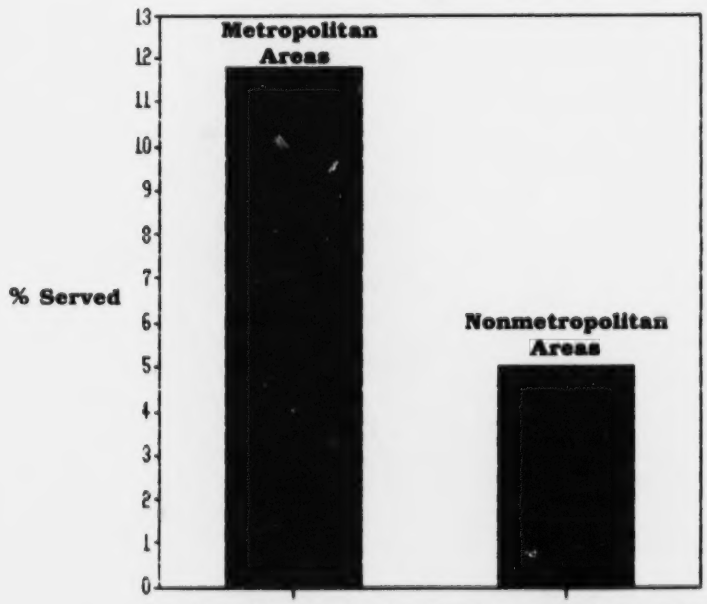
(1) Children less than 18 years of age living in households at or below 125% of the poverty threshold based on the 1980 Census.

Source: Summer feeding data collected by Public Voice from state summer food service program offices.

accurate representation of the actual percent of eligible children served by the program. For this calculation, the number of children below 125% of the poverty threshold was used instead of the number below 185% of the threshold (the actual level used to determine eligibility). Although the numbers of poor and near poor children have increased sharply since 1979, 1980 Census poverty data were used in this analysis because they are the most recent state level poverty statistics available. (1980 Census poverty statistics are actually from 1979 data.)

Table 3 displays both the strikingly small proportion of low-income children utilizing the summer food program nationally and the gap between rural and urban participation.[15] Overall for the states included in our survey, only **9.6%** of America's poor children participated in the summer feeding program. **11.8%** of the metropolitan poor children participated in the program and only **5%** of the nonmetropolitan poor children participated. (See Figure 1).

Figure 1: Summer Feeding Participation: Percentages of Poor Children Served, Urban vs. Rural Areas (1)



(1) This graph approximates the relative percentages of low-income children served in rural and urban areas and is not intended to be an accurate representation of the actual percentages of eligible children served by the program. For this calculation, the number of children served below 125% of the poverty threshold waas used instead of 185% of the poverty threshold (the actual level used to determine eligibility). 1980 Census data was used.

The 43 states included in our survey only are represented.

The "best" states (those with the highest percentages) and the "worst" states (those with the lowest percentages) are presented in Tables 4-1 and 4-2. It is critical to note that even in the "best" cases, the percentages of low-income served are extremely low--demonstrating that in the program overall and most critically in rural areas, poor children are seriously underserved by the summer food service program. Only 5 states of the 43 states included in this analysis served as many as 10% of their low-income rural children. In contrast, 22 states served 10% or more of their urban children.[16]

Table 4-1: The Worst States: States With the Lowest Ratio of Rural Poor Children Served by The Summer Food Service Program for Children

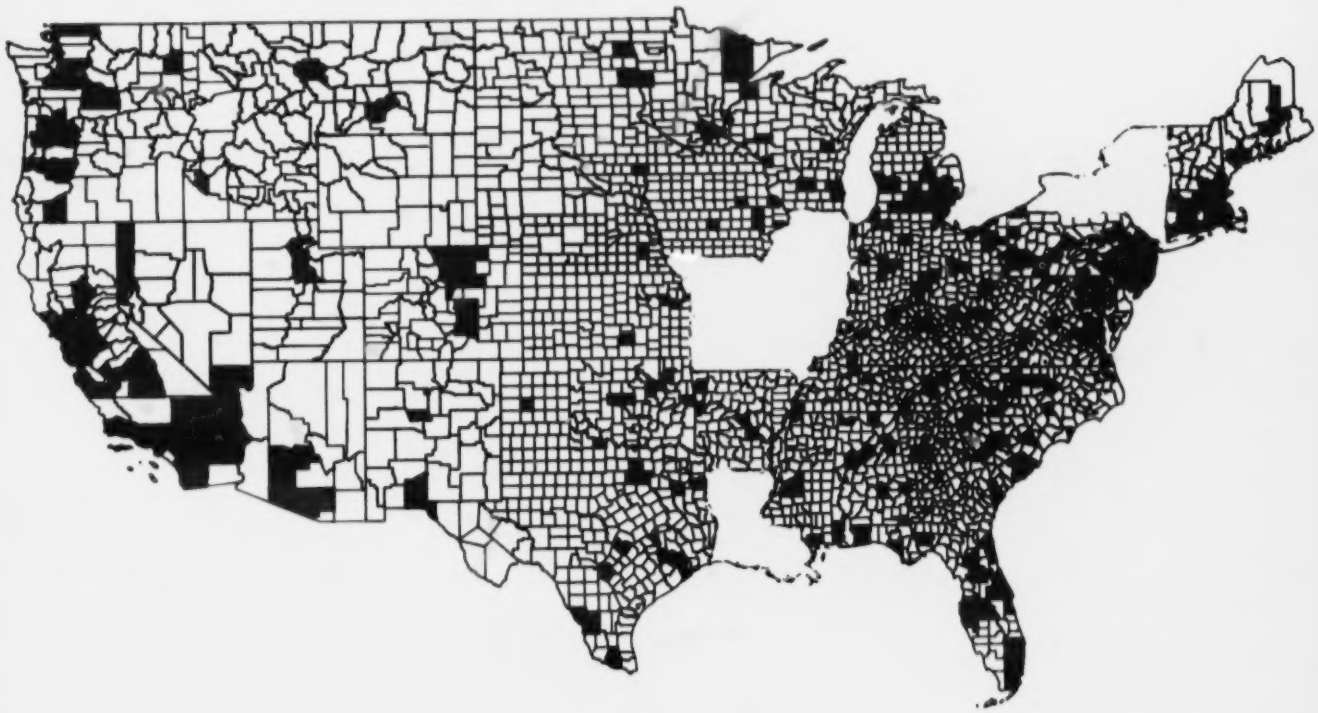
State	% Served
HAWAII	0
NEW JERSEY	0
ALASKA	0.3
ARKANSAS	0.3
WYOMING	0.4
MASSACHUSETTS	0.5
MAINE	0.6
INDIANA	0.8
IOWA	1
ILLINOIS	1.1
VERMONT	1.1

Table 4-2: The Best States: States Serving 10% or More of Poor Rural Children

State	% Served
MICHIGAN	10
ALABAMA	10.4
MISSISSIPPI	13.1
MONTANA	18.1
DELAWARE	40.3

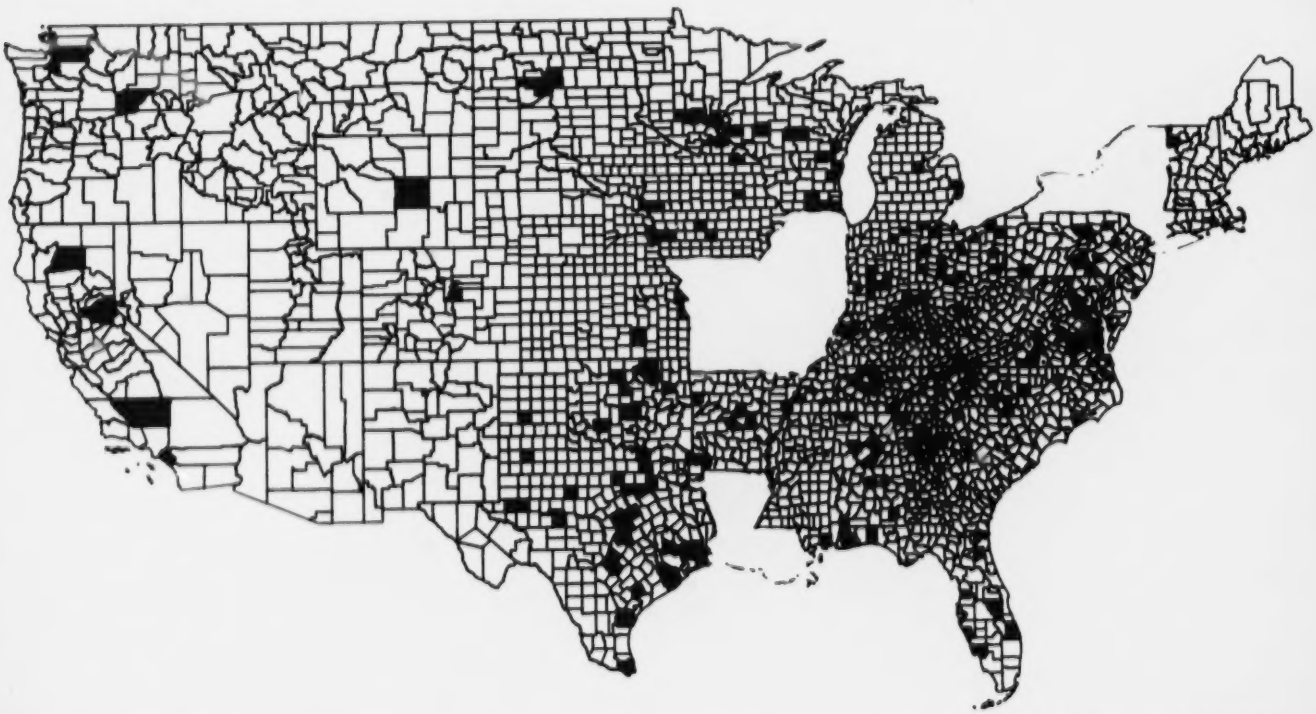
The maps in figures 2 through 5 portray a better picture of the gaps in summer feeding coverage in rural areas. Figure 2 displays all metropolitan counties in the continental United States in which summer feeding program sites were located in 1987. (Data was not available for Illinois, Louisiana, Missouri and New York). Figure 3 displays all metropolitan counties without summer feeding program sites in 1987. Figures 4 and 5 present the same data for nonmetropolitan counties with Figure 4 displaying all nonmetropolitan counties with summer feeding sites in operation in 1987 and Figure 5 displaying those nonmetropoli-

Figure 2: Urban Counties *with* Summer Food Service Program Sites 1987 (1)



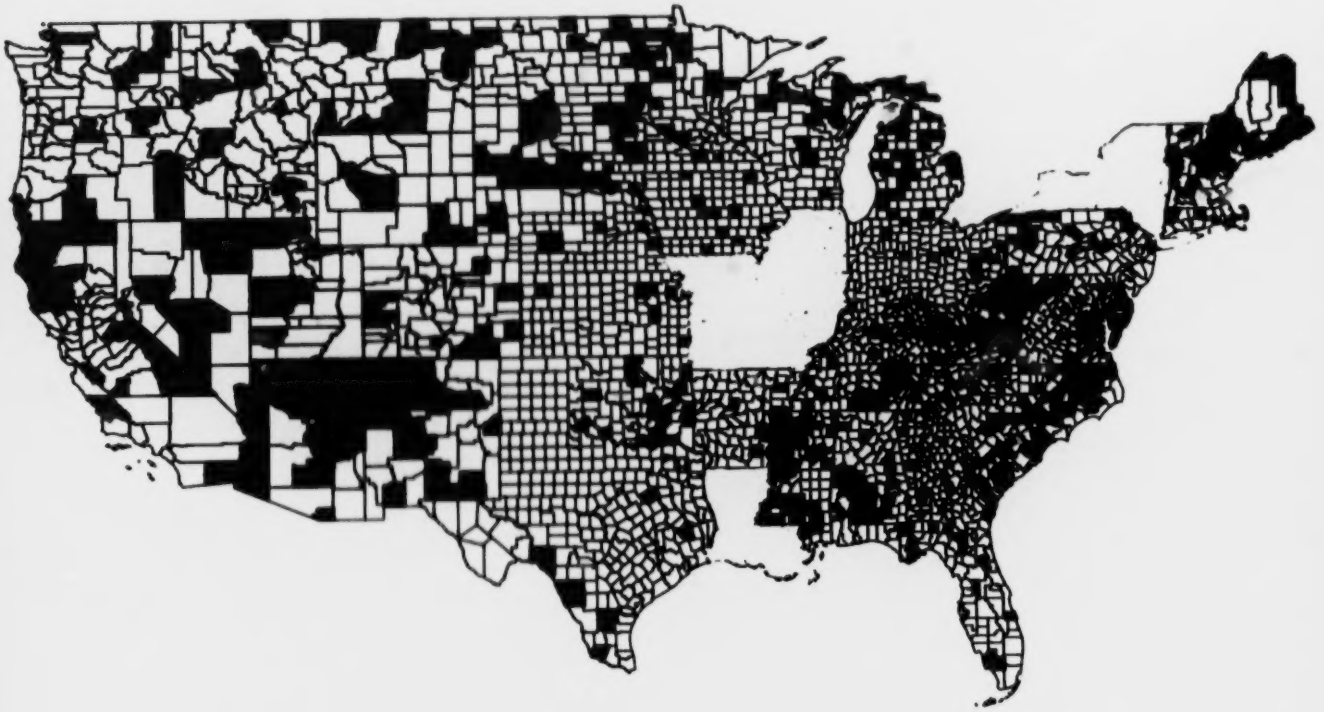
(1) All darkened areas represent counties in which summer feeding program sites were located in 1987. Data was not available for Illinois, Louisiana, Missouri and New York.

Figure 3: Urban Counties *without* Summer Food Service Program Sites 1987 (1)



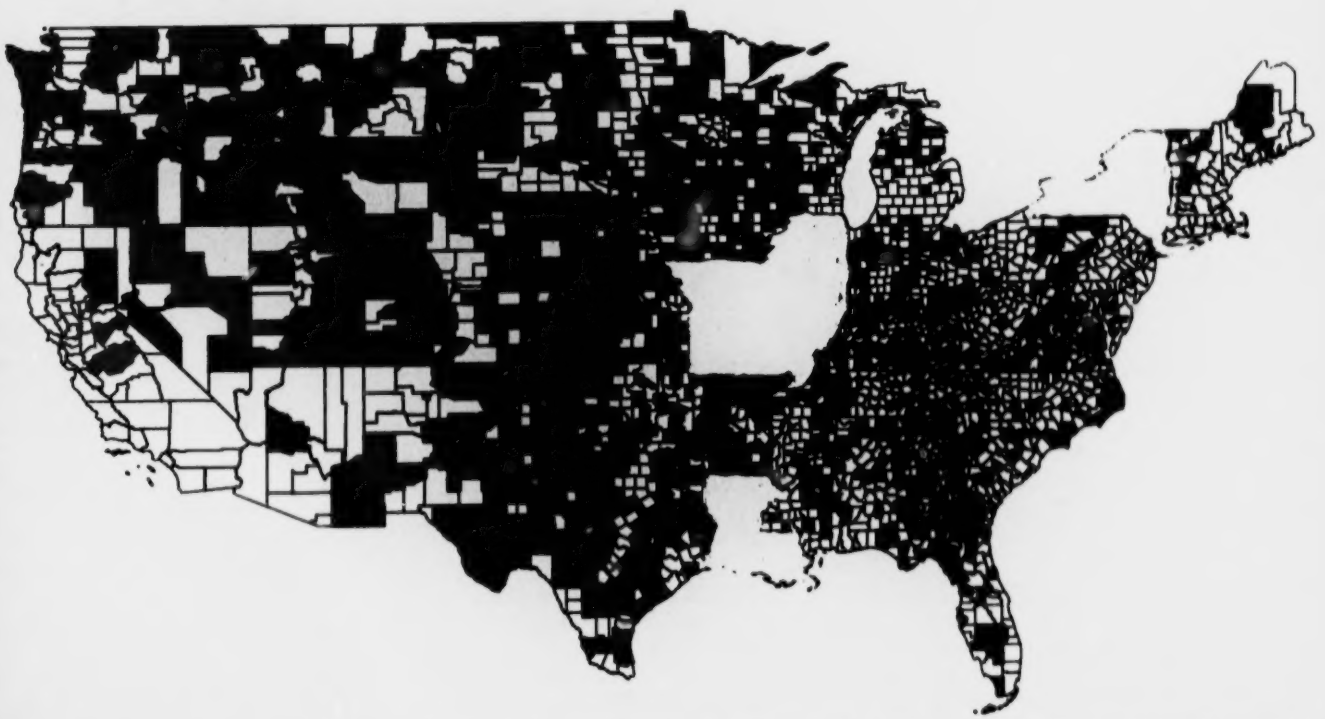
(1) All darkened areas represent counties without summer feeding program sites in 1987. Data was not available for Illinois, Louisiana, Missouri and New York.

Figure 4: Rural Counties *with* Summer Food Service Program Sites 1987 (1)



(1) All darkened areas represent counties in which summer feeding program sites were located in 1987. Data was not available for Illinois, Louisiana, Missouri and New York.

Figure 5: Rural Counties *without* Summer Food Service Program Sites 1987 (1)



(1) All darkened areas represent counties without summer feeding program sites in 1987. Data was not available for Illinois, Louisiana, Missouri and New York.

tan counties without summer feeding sites during the summer of 1987. Overall, summer feeding programs operated in approximately half of all metropolitan counties and only one-quarter of all nonmetropolitan counties.[17]

BARRIERS & RECOMMENDATIONS

"Current regulations set the program up for failure in areas where it is needed most, impoverished rural communities with no local resources."
--Western Summer Feeding Program Director

After collecting and analyzing the participation data received from the states, we attempted to explore the causes of the observed disparities in participation between rural and urban areas. In an informal telephone survey of state directors throughout the country, we were told repeatedly that the program as designed is simply not cost effective in rural areas. We were told that "rural schools don't want to waste their time running the program", that "rural areas don't have enough kids, it's not practical and too expensive to bus kids in" and that the "program is set up not to be worthwhile in smaller communities."

Interestingly, all of these state directors with the exception of one or two insisted on anonymity. Based on the strong reluctance of the majority, we decided not to use any names in the report. Names are mentioned in a few cases only with the consent of the appropriate state director.

The barriers to rural participation which were reported to us fell easily into four main categories which will be discussed individually on the following pages. The four main barriers are:

- o Exclusion of private nonprofit sponsors from the program
- o Lack of outreach funding
- o Insufficient reimbursement rates for rural areas
- o Overly stringent eligibility rules

Recommendations to alleviate these barriers follow each section.

I. EXCLUSION OF PRIVATE NONPROFIT SPONSORS FROM THE PROGRAM

"Community action agencies are the most logical groups to serve as program sponsors. They know the communities and facilities and have the staff to do it, but they're no longer allowed."
--State Summer Feeding Director

"City and county government in rural areas are not sold on the summer program. They're not part of the social services network and don't have the administra-

tive capacity. The exclusion of private nonprofit organizations effectively took the program away from rural areas."
--State Summer Feeding Director

The Barrier

As was discussed earlier, legislation enacted in August 1981 (P.L. 97-35) excluded private non-profit sponsors other than schools and residential camps from the summer food service program for children. As stated in H.R. 7, (child nutrition legislation which passed the House of Representatives in 1984), the declines in summer feeding program participation which have occurred since 1981 were directly linked to this 1981 provision. H.R. 7 included strong language asserting that, "prior to the 1981 Budget Reconciliation Act, the summer food service program served some 2.2 million children. The program currently serves approximately 1.5 million children. This drop in children is a result of the limitations on summer program sponsorship enacted under this Act [National School Lunch Act and Child Nutrition Act of 1966]."[18]

According to the program directors surveyed, the sponsor restrictions imposed in 1981 leave the program with a built-in bias against rural areas. Prior to 1981, rural program in particular depended heavily on community action agencies and nonprofit organizations such as churches, boys clubs and girls clubs to sponsor summer feeding program.

According to several directors, public schools, the main sponsors currently allowed to participate in the program, are difficult to recruit as sponsors in rural areas where resources are limited and population is widely dispersed. Schools and county social service agencies in rural areas are generally reluctant to run a program and frequently will not even consider the possibility, the directors explained. Yet under the 1981 restrictions they are the only potential sponsors for the program.

One director commented that rural schools don't want to waste their time running a program and that rural schools don't have enough personnel to run the program and are not willing to coordinate the effort. Another director has found in his state that rural school districts are generally not equipped to provide social services--"it is not within their perceived realm." County or city government in metropolitan areas, he noted in contrast, have extensive staffs and whole departments devoted to social services.

These rural schools are simply not open in the summer, and the costs of opening the facilities and preparing food on-site with only limited reimbursement are disproportionately prohibitive in rural areas. Overhead and indirect costs of the program includ-

ing lighting and kitchen facilities are spread over many fewer participants in rural areas. Without nonprofit sponsors, the program is not cost effective in rural areas and the children suffer as a result.

Severe drops in program participation as a result of the sponsor provisions were reported by a number of directors in the phone survey. Utah's director reported that their program was halved after the restrictive legislation was passed. Florida reported the loss of a number of very large rural sponsors. One example was given where a program was terminated due to the regulatory changes, leaving approximately 3000 children per day cut off from summer meals. Maine's program director noted that when the program changes came in 1981, about one-third of the children in the state were cut from the program, leading to "an awful lot of kids lost."

The prohibition of private non-profit organizations from the summer feeding program contrasts sharply with their involvement in other critical government programs. For example, private non-profit organizations deliver commodities through the Temporary Emergency Food Assistance Program (TEFAP) and are praised by both Congress and the Administration for these efforts.

Ironically, those private non-profit organizations such as community action agencies that are part of county government are allowed to sponsor programs and do effectively supervise programs in a number of states. One southern director pointed out that about half of the community action agencies in his state are part of county government and are therefore allowed to sponsor programs, while the other half, with comparable resources and staffs, are prohibited from sponsoring programs.

I. Recommendation: Restore Private Nonprofit Sponsors

We recommend limited restoration of private non-profit sponsorship eligibility to both rural and urban areas. As the 1977 and 1981 legislation was motivated by fears and isolated reports of sponsor abuses, we recommend that restrictions be implemented limiting the size of these sponsors.

A limit on sponsor size will restore non-profit sponsorship in virtually all rural areas where programs are generally smaller, and may also positively affect urban children in similar situations.

A limit on sponsor size has been included in past legislation including H.R. 7 which passed the House of Representatives in 1984. This bill allowed private non-profit organizations to sponsor programs if they had the facilities for self-preparation of meals or could obtain meals from a public facility. These sponsors were limited to 2,500 children daily at not more than 25

sites. The 1980 Agricultural Appropriations Act restricted private non-profit sponsors to serving not more than 500 children daily at not more than three sites.

II. LACK OF OUTREACH FUNDING

The Barrier

Recognition of the need for summer food service program sponsor outreach in rural areas already exists. In fact, it is mandated in the National School Lunch Act and Child Nutrition Amendments of 1977. According to Section 13(a)(4) of the National School Lunch Act:

> The Secretary [of Agriculture] and the States, in carrying out their respective functions under this section [the section authorizing the Summer Food Service program], shall actively seek eligible service institutions [sponsors] located in rural areas, for the purpose of assisting such service institutions in applying to participate in the [Summer Food Service] program.[19]

In reality, this provision is often not meaningful for the states as no specific line-item federal funds are allocated for outreach activities. States desiring to implement outreach programs have no choice presently but to utilize already overstretched resources for this purpose.

Currently, state and regional administered programs are mandated to conduct outreach, but few have initiated these efforts. The state directors argue that the Department of Agriculture (USDA) does not pressure the states to follow through with outreach activities. Most critically, without federal funding, outreach is all but impossible especially in states with small programs and only temporary staffs.

A food program specialist from the one of the regionally administered programs confirmed that the regionally operated programs as well as the state programs conduct only limited outreach initiatives at best. He commented that USDA puts no emphasis on outreach although they do monitor it and that the lack of line-item funding inhibits effective outreach.

The state of New Mexico recently received a small Department of Health and Human Services Community Service Block Grant to conduct summer feeding sponsor outreach. The director of New Mexico's program believes that New Mexico is one of the few states with such a program.

New Mexico's outreach efforts have been extremely successful. Participation by Native American children in the summer feeding

program increased by over 200% between 1986 and 1987. In 1986, five Navajo organizations participated in the program with a total of six sites. By 1987, after vigorous outreach efforts by the state, 44 Navajo sites participated.[20]

Despite these extremely promising successes, the outreach program in New Mexico is still threatened by insufficient and unpredictable funding. While the federal grant has allowed expansion of New Mexico's program, the majority of states remain severely limited in their ability to provide any outreach efforts whatsoever.

The absence of outreach precludes adequate sponsor recruitment. Agnes Molnar of the Community Food Resource Center in New York City noted recently that the exclusion of private sponsors from the summer feeding program hit rural areas hardest because "there are not outreach programs [in rural areas] to gain sponsors who might qualify even under current regulations."[21]

II. Recommendation: Mandate summer food program outreach efforts including sponsor outreach in rural areas.

Based on the severity of need for sponsor outreach in rural areas and on the already existing mandate for such initiatives, we strongly urge USDA to back up their own directive for "mandatory outreach efforts to needy areas" with funding for this purpose. We recommend general outreach in all program areas and specific sponsor outreach efforts in rural areas.

Funding should be allocated specifically for outreach, possibly via state administrative expense (SAE) accounts. The utilization of SAE accounts creates an automatic accountability mechanism to insure that the funds are spent for outreach activities.

III. INSUFFICIENT REIMBURSEMENT RATES FOR RURAL AREAS

> **The rural administrative reimbursement rate is only a drop in the bucket.**
> **--State Summer Feeding Program Director**
>
> **It's a hell of a lot of work to draw kids into the program in rural counties. It's not worth it, it may cost $2.50 for each child, but you only get back a buck or so.**
> **--Eastern Summer Feeding Program Director**

The Barrier

On the surface, federal regulations appear to compensate for the differential costs of providing the summer food service program in rural and urban areas. Once again, the reality is quite different.

Differential subsidies currently exist only for administrative costs. For the 1987 summer program, maximum per-meal administrative reimbursement rates for rural and self-prep sites were 1 cent/meal higher for snack supplements, 1.75 cents/meal higher for breakfasts and 2.75 cents/meal higher for lunches. It is important to note that these higher rates apply for both rural sites and self-preparation sites. Many of the states run only self-prep sites and therefore do not even distinguish for rural areas in their records.

The state directors we spoke with described the higher administrative reimbursement as grossly inadequate to compensate for the real differentials in costs. There are excessive bussing costs in rural areas unlike urban areas where drop-in sites are often used. Food costs are typically much higher in rural areas and vendors have to travel excessive distances to deliver food to non self-prep sites. In the case of rural self-prep sites, overhead costs must be spread out over far fewer children than in urban areas.

One director commented that the program just can't be run in rural areas on the current administrative rate. Small programs in particular are hurt by the per-meal design of the reimbursement rate. This director noted that one solution would be the establishment of a minimum administrative and operating cost base for programs in very rural areas with few participants and therefore few meals served.

In any case, the higher reimbursements apply only to administrative costs. Higher reimbursement rates are not currently available for rural operating costs.

Under section 13(b) of the National School Lunch Act, SFSP sponsors receive two types of federal cash subsidies: "operating costs" and "administrative costs." The regulations define operating costs to include: 1) the cost of obtaining food; 2) labor directly involved in the preparation and service of food; 3) the cost of nonfood supplies; 4) rental (or any "use allowance") for equipment and space; and 5) costs for transporting children in rural areas to rural food service sites. Administrative costs, on the other hand, include costs incurred by a sponsor related to planning, organizing and managing food service operations. [22]

While rural sponsors may in some cases receive larger subsidies for operating costs, the maximum allowable amount is the same for both urban and rural-- There is no rural-urban differential in the maximum subsidy for operating costs. [23]

Although USDA has the option to institute a higher ceiling for rural operating costs, it has not done so. According to the Congressional Research Service (CRS), the Department bases this

decision on an incomplete operating cost study done in the late 1970s which showed no significant difference to warrant operating cost differentials. [24]

Rural sponsors therefore receive two "breaks" in running their programs. Unlike urban sponsors, they may claim costs for transporting children as operating costs as long as the maximum operating cost ceiling is not breached. Along with self-prep sites, they also may claim the higher administrative reimbursement rate.

According to most directors and advocates in our survey, however, these provisions are simply inadequate in compensating for the higher costs of running a program in rural areas. The current reimbursement system with minimal compensation for the higher administrative costs of rural areas and no additional compensation for higher operating costs fails to adequately address the significant cost differentials between rural and urban areas.

III. Recommendation: Increase funding reimbursement for rural sites.

In order to reach adequate, more equitable funding levels, further study is needed to determine what is appropriate. We recommend that USDA update its analysis of operating costs in the summer feeding program, and that the operating costs necessary to provide the program to very rural areas be examined particularly closely. Transportation costs in particular make the program prohibitive for many potential sponsors in rural areas.

We also recommend further study of the appropriateness of a per-meal reimbursement for small rural programs. This system fails to equitably consider overhead and indirect costs of the program, many of which are higher in rural areas. The feasibility for establishing a system which would allow a floor or minimum reimbursement rate based on an economy of scale factor should be considered.

IV. OVERLY STRINGENT ELIGIBILITY RULES

The Barrier

Along with the exclusion of private non-profit sponsors, the 1981 summer feeding legislation further restricted eligibility by increasing the poverty concentration necessary to qualify an area for the program. Prior to the legislation, eligibility rules required that at least one-third of an area's children be eligible for free or reduced price school meals--this was increased to 50% in the 1981 legislation.

One Western state director explained that in her state, the towns are so small that the schools serve large areas comprising children with diverse economic backgrounds. Despite the large

number of poor and needy children in the area, they have been unable to qualify sites based on this criteria (geographic eligibility).

"Enrolled site" eligibility, the alternative to "geographic site" eligibility, according to many of the directors, involves an excessive amount of administrative hassle and paperwork especially wher small numbers of children are involved. As a result, the "enrolled site" provision which was instituted with rural areas in mind, often fails to compensate for inadequacies with the "geographic site" qualification regulations.[25] The "enrolled site" alternative is important, especially in areas with diverse populations and pockets of concentrated poverty, but compared to geographical eligibility, can be an administrative nightmare and is frequently not used in rural areas.

Despite its problems, the "enrolled site" provision passed in 1977 signalled Congressional awareness of the difficulties many states face in qualifying programs in rural areas In 1977 therefore, Congress concluded that even the 1/3 cutoff left out many needy children, especially in rural areas. The 1981 legislation represents a sharp reversal of this earlier flexibility. While the 1977 provision to allow "enrolled site" eligibility remains (eligibility based on participants in a site only rather than in an entire geographic area), it has been seriously curtailed by the increased eligibility limitation.

IV. Recommendation: Restore the 1/3 eligibility threshold

We recommend that the eligibility cutoff be restored to 1/3 rather than 1/2 of an area's children eligible for free and reduced price school meals. The program ran effectively prior to 1981 with the 1/3 cutoff. The lowered limit will be especially crucial for rural programs where needy children are more spread out geographically and less likely than inner city areas to form a concentrated pocket of poverty (50% or more).

V. PAPERWORK

Finally, it is important to note that unanimity existed among the directors surveyed regarding the excessive amounts of paperwork and administrative burdens imposed by the program. Clearly some paperwork is required to maintain proper monitoring of the program. The directors surveyed, however, adamantly asserted that the summer feeding program required a disproportionate amount of paperwork and recordkeeping and that the burden is often greater in rural areas where resources are more limited.

SUMMARY OF RECOMMENDATIONS

I. RECOMMENDATION: RESTORE PRIVATE NON-PROFIT SPONSORSHIP

We recommend limited restoration of private non-profit sponsorship eligibility to both rural and urban areas. As the 1977 and 1981 legislation was motivated by fears and isolated reports of sponsor abuses, we recommend that restrictions be implemented limiting the size of these sponsors.

A limit on sponsor size will restore non-profit sponsorship in virtually all rural areas where programs are generally smaller, and may also positively affect urban children in similar situations.

A limit on sponsor size has been included in past legislation including H.R. 7 which passed the House of Representatives in 1984. This bill allowed private non-profit organizations to sponsor programs if they had the facilities for self-preparation of meals or could obtain meals from a public facility. These sponsors were limited to 2,500 children daily at not more than 25 sites.

The 1980 Agricultural Appropriations Act restricted private non-profit sponsors to serving not more than 500 children daily at not more than three sites.

II. RECOMMENDATION: MANDATE SUMMER FOOD PROGRAM OUTREACH EFFORTS INCLUDING SPONSOR OUTREACH IN RURAL AREAS

Based on the severity of need for sponsor outreach in rural areas and on the already existing mandate for such initiatives, we strongly urge USDA to back up their own directive for "mandatory outreach efforts to needy areas" with funding for this purpose. We recommend general outreach in all program areas and specific sponsor outreach efforts in rural areas.

Funding should be allocated specifically for outreach, possibly via state administrative expense (SAE) accounts. The utilization of SAE accounts creates an automatic accountability mechanism to insure that the funds are spent for outreach activities.

III. RECOMMENDATION: INCREASE FUNDING REIMBURSEMENT FOR RURAL SITES

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APPENDIX I

DATA METHODOLOGY

We used average daily participation figures and totaled all county figures in a state to arrive at a state total. This calculation fails to take into account the number of days that the program runs.

In most cases, the average daily participation data presented (ADP) is for the peak meal of the day only (generally lunch). This is not necessarily uniform, however. Some states use an average of all meals served during the day.

In most cases, the data is an average for the entire summer. Some states, however, rely on peak month ADP (usually July data only). We have indicated these cases whenever the state office did so.

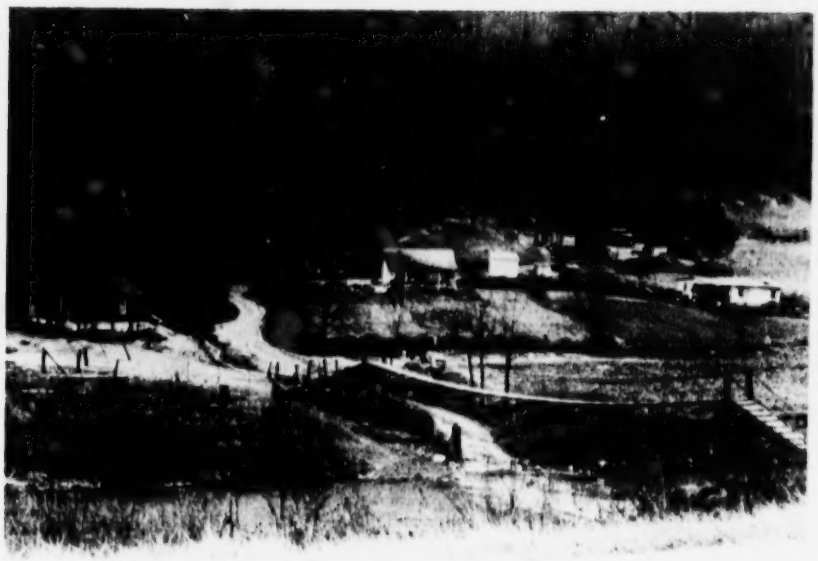
In most cases, the data counts the subsidized meals only. These numbers are generally extracted from claims reimbursements records. These numbers exclude meals served at camps to children not meeting the eligibility criteria. There may be some cases where the data includes these "non-eligibles" but we are not specifically aware of any.

Metro/Nonmetro

Throughout the report, the terms metro/nonmetro and urban/rural are used interchangeably. All are based on the Bureau of the Census definitions of metropolitan and nonmetropolitan areas.

Metropolitan counties are part of metropolitan statistical areas (MSAs). An MSA is a county or group of counties containing at least one central city with a population of 50,000 or more, or a central city with a population of at least 25,000 if the city's population plus the population of contiguous, thickly populated places equals 50,000 or more. Additional contiguous counties are considered part of an MSA if they are economically and socially integrated with the central city.

Nonmetropolitan counties include all counties not in an MSA.



Chapter VIII
Food Stamps

INTRODUCTION

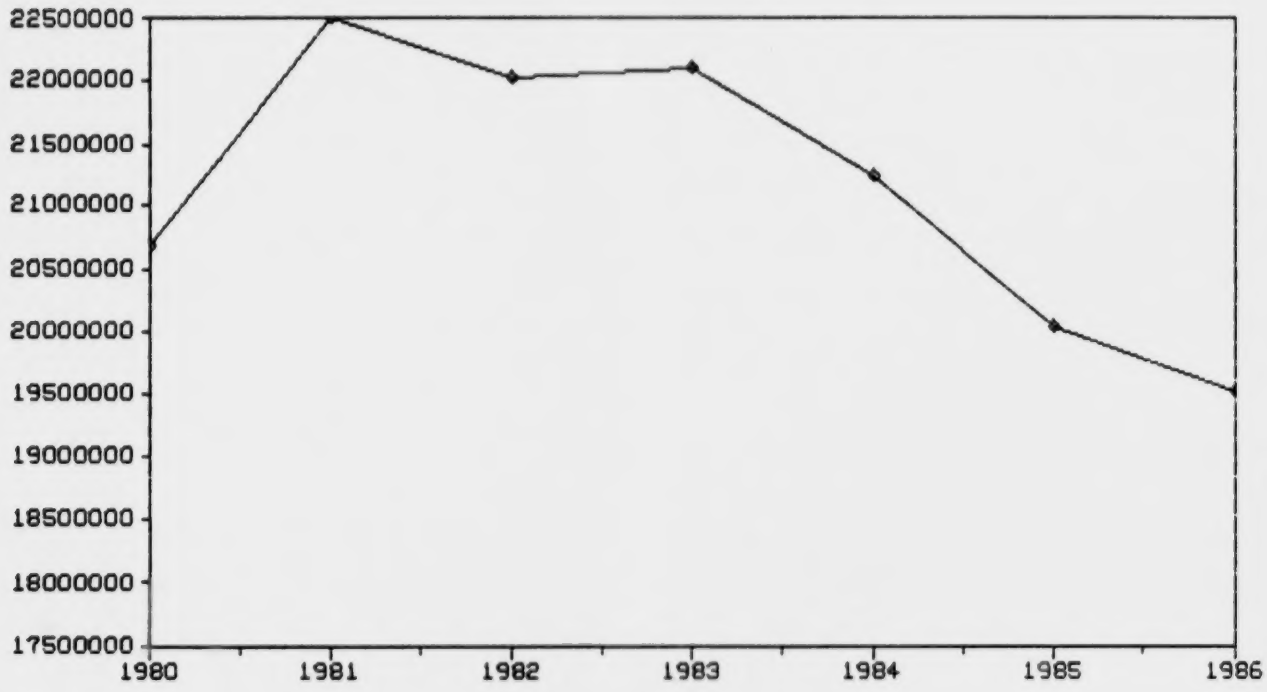
The food stamp program is the largest food assistance program serving America's hungry with nearly 20 million participants each month and total annual issuances of nearly $11 billion. Food stamp program benefits are provided in the form of food stamp coupons designed to supplement monthly food purchases. Eligibility for the program is based on household income and assets and non-financial (citizenship, social security number, work requirement) status. Benefits are fully funded by the federal government.[26]

Although millions of needy Americans are served by the program, millions more are eligible but do not receive food stamp benefits. Significant gaps in program coverage have been documented in a number of studies and reports. Overall, consensus exists that millions of food stamp eligibles do not receive program benefits. In recent years, in fact, food stamp participation has actually declined while poverty has risen. Between 1980 and 1985, food stamp participation dropped by over 650,000 persons although there were almost 4 million more persons living below the poverty line. Participation dropped by an additional half million participants between 1985 and 1986.[27] (See Figure 1).

Research conducted by the U.S. Department of Agriculture (USDA), the supervising agency for the food stamp program, shows that more than one-third of all persons eligible for the food stamp program do not participate.[28] The research confirms that 1) those left out of the program have limited incomes; 2) that participation rates are especially low among the elderly; 3) that participation rates are lower in rural areas than in metropolitan areas; 4) that the working poor are less likely to receive food stamps than those who do not work; and that 5) eligible persons who are not already part of the public assistance system are much less likely to receive food stamps.[29]

Many of these unserved eligibles do not know about the food stamp program or are inadequately informed about their eligibility and therefore do not apply. Many others, as a recent General Accounting Study confirms, apply but are wrongly denied benefits. GAO found in two representative states (Illinois and Maryland) that improper denials or termination rates were significantly

Figure 1: National Food Stamp Participation: January 1980-1986



Source: FNS Summary of Food Stamp Program Operations, January 1980-1986.

higher than was reported by the states and that at least 42% of the households identified as improperly denied or terminated lost benefits as a result.[30] The results of this study indicate a far more serious problem than was previously believed.

Specific program policies bar the needy from receiving food stamp benefits. These barriers to food stamp participation discourage needy persons from applying and often keep those who do apply off the program.

The purpose of this section is to identify and explain these barriers to participation through a compilation of findings from key studies and reports on the subject. The barriers presented in this report represent a consensus among advocates and researchers both private and public that these are the most critical obstacles to reaching increased numbers of food stamp eligibles with the program.

SIGNIFICANCE TO THE RURAL POOR

This study focuses on a particularly underserved population--the rural poor. While poverty has increased throughout the country

since 1980, rural areas in particular have experienced severe growth in poverty conditions. Unlike the nation's urban areas, which overall have experienced a modest decline in poverty rates during the past three years, rural areas have been passed over by this "economic recovery". Subsequently, the rate of poverty in the nation's nonmetropolitan areas in 1986 surpassed that in the country's Central Cities.

Table I displays these trends.

Table I
Poverty Rates in Metro, Nonmetro and Central Cities (1975-1986)

(percentages)	1979	1980	1981	1982	1983	1984	1985	1986
Central City	15.7	17.2	18.0	19.9	19.8	N/A	19.0	18.0
Metropolitan	10.7	11.9	12.6	13.7	13.8	N/A	12.7	12.3
Nonmetropolitan	13.8	15.7	17.0	17.8	18.3	N/A	18.3	18.1

Source: Bureau of the Census, Current Population Reports, Series P-60.

A 1986 report by the Physician Task Force on Hunger in America, "Hunger Counties 1986", identified the 150 worst "hunger counties" in America. The Task Force examined the prevalence of "hunger" in these poor areas. These counties were defined by the existence of two factors; more than 20% of the county residents below the poverty level and fewer than one-third of eligible needy residents receiving food stamp benefits.[31] Almost 97% of the counties identified in the report were rural counties.[32]

Since 1985, Public Voice has examined the nutritional and food assistance needs of the rural poor. We have found that the nutritional deficiencies prevalent among the rural poor are exacerbated by low participation in the food assistance programs designed to serve them.[33]

STRUCTURE OF THE ANALYSIS

This analysis is divided into seven sections, each covering one of the seven key barriers to food stamp participation. These barriers are:

- **Physical Access Barriers**
- **Asset Restrictions**
- **Administrative Barriers**
- **Stigma/Attitudinal Barriers**
- **Informational Barriers/Outreach**
- **Barriers Unique to the Elderly**
- **Food Stamp/Public Assistance Program Link**

The principal issues concerning each barrier are explored and discussed with summaries and excerpts from the most recent reports on this subject dispersed throughout the report. Critical concerns for rural areas are then highlighted. A recommendation section focusing specifically on rural issues follows these discussions.

I. PHYSICAL ACCESS BARRIERS

SIGNIFICANCE TO THE RURAL POOR

Rural recipients often face long trips to food stamp offices over difficult roads without adequate public transportation available for those without access to vehicles. Lack of access to food stamp offices increases the burdens posed by the complex administrative requirements--due to complexities in the application process, applicants are often forced to make multiple trips to the food stamp office.

Bendick has found that when applications can be filed only at the food stamp office, many eligible persons are discouraged from applying. He concludes that "The feasibility of participation is also affected by the total number of office interviews required, the distance involved with each visit to the office, and the time consumed in each interview."[34]

The Physician Task Force on Hunger surveyed a number of food stamp offices in selected low-participation areas. Their results are presented below:

Physical Isolation of Food Stamp Offices in Selected Low-Participation Areas

County/State	No. Food Stamp Offices	Square Miles in County
Madison, Arkansas	1	832
Baca, Colorado	1	2,508
Alachua, Florida	1	902
Walton, Georgia	1	1,066
Washington, Idaho	1	1,466
Morrison, Minnesota	1	1,127
Carter, Montana	1	3,300
Union, New Mexico	1	3,294
Cherokee, N. Carolina	1	1,500
Dunn, N. Dakota	1	2,081
Spink, S. Dakota	1	1,472
Wayne, Utah	1	2,592
Mecklenberg, Virginia	1	619

Source: Survey of Food Stamp Offices, Harvard School of Public Health, Physician Task Force on Hunger in America, April, 1986.[35]

- **Regardless of county size, the rural poor face severe difficulties in accessing food stamp services. This is especially true in states with geographically large counties and insufficient or no satellite offices.**

We found that even in states with smaller counties such as Kentucky and Georgia, the time required to travel to food stamp offices and the absence of reliable public transportation posed significant barriers to food stamp participation in rural areas.

- **Physical access problems are especially severe for the rural elderly population.**

The elderly, in particular, suffer from isolation. In his study of the elderly in parts of three states, Hollonbeck found that close to one-third of program eligibles stated that getting to the food stamp office was a "big problem." Non-participants, he found, tended to live somewhat farther from the food stamp office than participants.[36]

RECOMMENDATIONS TO IMPROVE ACCESS

The Select Committee on Hunger in a 1986 majority report recommended improving physical access to program offices for rural communities, particularly in areas with high poverty rates and on Indian reservations and migrant farmworker camps.[37]

We support this direction and also recommend the expansion of satellite offices and provision of itinerant workers. These services experienced severe cuts during the past 5 years.

We recommend the reopening of all program offices and sub-offices which were closed in recent years in order to ensure that each rural county has at least one program office.

We recommend that Congress require state agencies to examine the impact of a proposed office closing or relocation upon access to the program of eligible persons, particularly the rural, elderly, disabled and homeless, and to prepare and implement plans for minimizing any adverse impact.

We recommend that Congress allow households in project areas with substantial transportation difficulties to be certified by telephone or a home interview without an in-office interview.

We recommend the implementation of at least one state-wide toll free food stamp hotline in each state to receive informational requests from those requiring information or other program related assistance.

Because applicants are often forced to choose between work or training and participation in the food stamp program, we recom-

mend that Congress require state or local offices to be open at sufficient locations and hours so that individuals in work, education, training or rehabilitation can participate in the food stamp program without missing work or classes.

II. ASSET RESTRICTIONS

Current asset eligibility rules limit an eligible household's liquid assets to $2000, or $3000 if the household has an elderly or disabled member. Most liquid assets are counted as are certain nonliquid assets.

Non-liquid assets

The food stamp recipients' home, and normal household belongings, regardless of value, are not counted toward the asset test nor is contiguous property.

Separate parcels of land are counted in this category. Land is exempted if it annually produces income consistent with its fair market value even if only used seasonally.

Property is also exempted if it is determined to be essential to the employment or self-employment of a household member. This regulation allows for the exclusion of work-related equipment such as farmers machinery.

Vehicle Asset Limitation

A vehicle, regardless of value, is excluded from the assets category if it is: 1) used primarily (over 50% of the time) for income-producing purposes; 2) annually producing income consistent with its fair market value, even if used only seasonally; 3) necessary for long distance travel essential to the employment of a household member. In addition, a vehicle is excluded if it is lived in or if it is used to transport the physically disabled.

Vehicles not falling into these categories are counted toward the asset ceiling if the fair market value (based on blue book prices) is above $4500 for one car per household plus any car which is necessary to commute to work, school or look for work. Loans can also be deducted up to $4500. The amount in excess of $4500 is counted as an asset.

- **Current income asset limits are too low, keeping many needy from receiving food stamps.**

The Presidents Task Force on Food Assistance considered this problem seriously and in January 1984 recommended the raising of asset limits for food stamp eligibility to $2250 for nonelderly households and to $3500 for elderly.[38]

- **The vehicle asset cap of $4500 has not been raised since 1977 despite soaring automobile costs since that time.**

The Presidents Task Force also recommended the raising of the automobile exemption limit to $5500.[39] The Reagan Administration opposed its own Task Force recommendations for both higher income asset ceilings and an increased vehicle asset cap.

- **Asset limits are especially restrictive for the "new poor" or working poor who may be destitute financially with no source of income, yet still be refused assistance due to assets.**

SIGNIFICANCE TO THE RURAL POOR

- **The vehicle asset limits are particularly restrictive in rural areas where vehicles are sorely needed for hauling water and wood.**

Public Voice in "Profiles of Rural Poverty" found that throughout the country, vehicle owners, particularly those using their vehicles for work, were confused about food stamp eligibility and asset restrictions. In Kentucky, potentially eligible families did not apply, believing that their work-related vehicles such as coal trucks excluded them from the program.

In rural areas throughout the nation, the poor depend on their vehicles to haul water and wood to their homes which often lack indoor plumbing or piped-in fuel. The value of a reliable vehicle such as a two year old pick-up truck exceeds the vehicle asset ceiling and keeps them from receiving program benefits.

- **The vehicle and income asset restrictions affect the "new" rural poor such as farmers, discouraging many of them from applying for the program.**

Public Voice has found that current program regulations often prevent farmers facing foreclosures from being eligible to participate.

RECOMMENDATIONS

We recommend waivers to be granted exempting individuals who must haul their water or fuel to their home from the current value cap allowed for a vehicle.

We recommend that Congress allow households in project areas with substantial transportation difficulties to own one non-luxury vehicle which is not counted toward the asset limit.

We recommend that Congress raise the vehicle value limit to $5500 from $4500, and index that level to annual increases in the transportation component of the Consumer Price Index.

We support current proposals before Congress to alleviate existing barriers to participation among farmers, such as the provisions in the Food Stamp Family Welfare Reform Act, H.R. 3337 (passed by the House as part of H.R. 1720, the welfare reform bill) which included the ability to annualize income when farm expenses are irregular, the exclusion from income of funds from two-payee checks when the farmer has not received those funds, the exclusion of farm land and machinery from assets for one year after a household has ceased farming, a strengthened requirement that past income cannot be used to measure current income if changes have occurred or are likely to occur in the certification period, and intensive training and instructional materials for caseworkers who will be handling farmers.

We recommend a waiver exempting farmers in the process of foreclosure from having assets normally used for farm work counted in their asset determination.

III. ADMINISTRATIVE BARRIERS

"State officials consistently report that federal rules and regulations can make it nearly impossible to reach many Americans who are in need of and eligible for food stamps".
--Physician Task Force on Hunger in America--[40]

The key administrative barriers to food stamp participation are:

- **Complex application forms**
- **Frequent legislative and regulatory changes in the program**
- **Restrictive monthly reporting and retrospective budgeting requirements (mrrb)**
- **Error rate sanction system and excessive demands for verification**
- **Issuance methods**

A) Complex Application Forms

- **Food stamp application forms are excessively complex and lengthy, running as many as 42 pages in some states.**

Currently there is no national set of forms or standardized application process. A five-page standard form was established

in the late 1970's. This more standardized system was dropped in 1981, and each state now has its own system and own food stamp forms.[41]

The Reagan Administration's Task Force on Food Assistance reported repeated complaints from advocates and clients that food stamp applications were complex, confusing and time-consuming. According to their 1984 report, 'The application form and requisite worksheet cover nine pages of detailed questions. Such detail allows a national program to be more flexible in meeting specialized needs, but this flexibility clearly has costs."[42]

These costs, according to Bendick, affect most greatly those least able to protect their interests. According to Bendick, "one-third of such documents [food stamp applications] require college level reading skills, while the bulk of the poverty population (75%) has no more than an eighth grade education."[43] He attributes much of the confusion over paperwork to "unnecessary complications", especially excessive and confusing verification requirements and application forms.

B) Frequent Legislative and Regulatory Changes in the Program

- **The frequent legislative and regulatory changes in the program further complicate program administration.**

The Physician Task Force cites an informal study by Congressman Mickey Leland (D-TX), Chairman of the House Select Committee on Hunger, which found that USDA implemented 95 separate changes in the program during the 1981-1982 period alone. Many more changes have been added since that time.[44]

The Presidents Task Force on Food Assistance pointed out in their report that since the food stamp program was established in 1964, it has been altered and restructured by legislative initiatives in 1969, 1970, 1973, 1977, 1979, 1980, and twice in 1981 and 1982.[45] These constant changes in the program increase caseworker error, confusing both workers and clients alike.

C) Restrictive Monthly Reporting and Retrospective Budgeting

- **Restrictive monthly reporting and retrospective budgeting requirements place an unnecessary burden on applicants while failing to significantly cut program costs or reduce caseworker errors.**

Monthly reporting requires that certain household categories provide eligibility information on a monthly basis. Retrospective budgeting requires food stamp offices to determine eligibility based on a household's income from the previous month rather than estimating future incomes.

A recent Center on Budget and Policy Priorities report summarized the research which has been carried out to date on the impact of monthly reporting and retrospective budgeting (MRRB). They found that the initial decision to institute mandatory MRRB in both the Aid to Families with Dependent Children Program (AFDC) and food stamp program was based on the only research data published at the time--data from the first year of a two-year mrrb demonstration in the AFDC program in Boulder and Denver, Colorado. The first-year data showed that mrrb reduced AFDC benefit costs by 4.3%. Since that time, however, more extensive research on mrrb and second year data from Colorado have become available, none of which show encouraging results. During the second year of the Colorado project, for example, costs actually increased in the AFDC program.[46]

The majority of research in this area demonstrate that mrrb does not significantly decrease administrative costs while it adversely affects participation among large numbers of eligibles. A Michigan study found that 93.7% of the applicants terminated for failing to meet the monthly reporting requirements were otherwise eligible. The Congressional Budget Office (CBO) has also altered their initial cost-saving predictions for mrrb. In a recent report, CBO indicated that "Given the evidence currently available, it is likely that the original savings estimate overstated the effects of this policy change." [47] CBO estimated in 1983 that a legislative proposal to make mrrb optional for states in the food stamp program would have little impact on program costs.[48]

Despite these indications that mrrb does not reduce program costs and keeps many eligibles from receiving benefits, many states have increased the percentage of their food stamp caseloads required to provide monthly reports. In Georgia, for example, 70% of food stamp recipients were recently forced to comply with new, extensive reporting requirements in order to continue receiving food stamps. Prior to this policy change (implemented in Fall of 1986), approximately 12-15 percent of the state's caseload was required to comply with mrrb procedures. In a recent public hearing on the food stamp program in Georgia organized by Public Voice, the barriers to participation posed by the restrictive mrrb requirements were consistently noted by advocates and food stamp clients. Recent data from that state provides strong evidence that the adoption of mrrb has resulted in a significant decline in participation.[49]

D) Error Rate Sanction System

- **The error rate sanction system is a more indirect, although critical, administrative barrier.**

The Federal Government currently oversees an error rate sanction system for the food stamp program. Error rate determinations are based on federal and state quality control reviews which

aggregate the amount of erroneous issuances in the state. Nationally established maximum error rates currently exist for overissuances and payments to ineligibles, but not for underissuances and improper denials or terminations. State failure to meet these error rate targets results in fiscal sanctions against the states.

Because state error rate sanctions are subtracted from federal administrative reimbursement money, the threat of sanctions is taken very seriously by the states.[50]

Federal pressure on the states persists despite widespread belief that the error rate system has serious flaws:

A recent National Research Council panel of the National Academy of Sciences found that the current food stamp quality control program may "lead to the neglect or detriment of important program objectives." Those objectives, according to the report, could include serving all eligible applicants, improving the nutritional status of participants and ensuring the timely payments of benefits.[51] The Panel concluded that the major problem with the quality control system was that it places almost sole emphasis on overpayments and offers little support to continued improvement in administration.[52]

In contrast, another congressionally mandated study of the error rate system which was conducted by USDA concluded that the current quality control system is basically sound.[53]

More recently, the General Accounting Office (GAO) examined the food stamp quality control system in two representative states, Illinois and Maryland. The Agency concluded that the rates of improper denials or terminations in both states were substantially higher than reported by either state. GAO concluded that while the quality control system is designed to measure the extent of 1)improper denials or terminations; 2) overissuances, and 3) underissuances, in practice "the Service and the states have focused their attention on that part of the system for which states are financially penalized-overissuances. They have not paid close attention to the part of the system that is intended to measure states' effectiveness in assuring that eligible persons are not erroneously denied or terminated benefits."[54]

Congressman Panetta (D-CA), Chairman of the House Subcommittee on Domestic Marketing, Consumer Relations, and Nutrition, among other congressional leaders, has expressed his intention to examine this complex issue more closely.

E) Issuance Methods

- **The lack of direct mail issuance in many states and counties keeps many eligibles, particularly those who must travel long distances to redeem coupons, from participating in the food stamp program.**

Currently, issuance methods used to distribute food stamps are determined by the states. Under mail issuance, the food stamp coupons are mailed directly to recipients' homes or post office boxes. Another common issuance method, the "ATP" (authorization to participate) system, uses ATP cards or documents which are mailed each month to recipients. The recipients must then take the ATP card to a contracted issuance agent to be converted into food stamp coupons.

The lack of mail issuance is of particular concern for rural participants. In these areas, the lack of adequate transportation and the excessive distances usually required to reach program offices makes mandatory mail issuance even more critical. It should be noted that this problem exists among urban recipients as well--especially those in areas lacking a strong public transportation system.

SIGNIFICANCE TO THE RURAL POOR

These administrative barriers apply to both rural and urban areas, but do they apply equally? Public Voice has found that the rural poor often face unique problems in accessing the program.

This section will focus on those barriers which pose particular problems for the rural poor--

- **The complex application process forces many applicants to make repeated and unnecessary trips to the food stamp office. For rural residents, these trips frequently involve long distances over unpaved roads.**

- **The complexities of the application process and restrictive mrrb regulations often require applicants to make numerous phone calls to the food stamp office. For rural residents, these phone calls are often costly long distance calls.**

- **Inconvenient office hours are a particular problem for the rural poor.**

Public Voice found in "Profiles of Rural Poverty: Facing Barriers to the Food Stamp Program" that many rural poor and food stamp recipients are forced to take days off from work in order to travel to the food stamp office. The rural poor are more likely to be working poor and they must often take time off from their jobs to apply.

- **The lack of mail issuance in many areas poses a particular problem to those without their own transportation, particularly in rural areas. The costs involved in obtaining food stamps in such states is often excessive-and many eligible people do not participate as a result.**

RECOMMENDATIONS TO OVERCOME ADMINISTRATIVE BARRIERS

Application Procedures
We recommend that a federal effort be undertaken to encourage and require states to simplify and shorten application forms and procedures.

Because untrained caseworkers can increase administrative burdens for clients without reducing payment errors, we recommend that Congress or USDA require that training for caseworkers to ensure that benefits are promptly and accurately awarded.

Monthly Reporting and Retrospective Budgeting
We recommend that USDA cease pressuring states to expand the proportion of cases required to be on monthly reporting. Instead, states should be encouraged to carefully target the categories of households to be subject to monthly reporting. This approach would optimize overall cost savings while minimizing the negative impact on needy persons.

Because payment errors are likely to increase when recipients do not understand their reporting responsibilities or are unable to call a caseworker to report changes, we recommend that Congress require state agencies to provide each adult member of a household with a statement of the household's reporting responsibilities and a toll-free number, available at least six hours each business day, to call in order to report changes.

Error Rate System
We support the congressional moratorium on food stamp error rate sanctions until new reform legislation is passed to address the key problems in the program.

Because the error rate system causes a high rate of improper denials and terminations, we recommend that Congress require that all notices to applicants and recipients to contain information about the availability of legal services and other free food stamp representation.

Issuance
We recommend that direct mail issuance be made available to all rural participants.

IV. STIGMA/ATTITUDINAL BARRIERS

Attitudinal barriers can be divided into two broad categories; 1) stigma resulting from personal dislike of receiving "welfare" income based on fear of loss of self-respect or the respect of others and 2) stigma resulting from the belief that one does not really need assistance, that others may need it more.[55]

Stigma is particularly strong in the food stamp program since it is a large, visible government program. Current federal emphasis on fraud in the program clearly exacerbates, and some say causes,

many of the attitudinal barriers to receiving food stamps. Federal preoccupation with "food stamp cheats" obscures the fact that over 95% of households receiving food stamps are eligible for them.[56]

Stigma is inextricably linked to the other barriers discussed in this report--restrictive administrative requirements and severe warnings against fraud (the error rate sanction system) frighten potential applicants and reinforce negative attitudes among eligibles as well as the community at large.

SIGNIFICANCE TO THE RURAL POOR

Katherine McNamara of Iowa Legal Services comments on stigma among farmers:

> People feel down and out anyway. They keep hearing from politicians that things will get better, so they try to hold on without requesting help. They're hungry but proud and the political rhetoric plays into the pride in a way that hurts the families. If they get desperate and begin to succumb, to go for help, they face the stigma of being told that people on food stamps are either lazy or cheats.[57]

- **"Small town pride" keeps many rural individuals away from food stamp offices.**

The rural eligible nonparticipants in Richard Coe's research were more likely to respond that they didn't need food stamps. Overall, 20% of the eligible nonparticipants in his study mentioned attitudinal barriers as their reason for not participating in the food stamp program. The majority of respondents said they did not need the assistance.[58]

The pride issue, according to Harvard psychiatrist William Beardslee, "really refers more to the prejudice and stigma in the minds of those who are not on food stamps. Talk of pride is a way of putting people down and keeping them down."[59]

- **Negative stigma is particularly prevalent among the "new poor" including farmers.**

Farmers are in a double bind, not only feeling reluctant to apply for food stamps because of the stigma, but also feeling chastised by government officials telling them that they lost their farms due to poor management.[60]

In "Profiles of Rural Poverty", Harriet Bogan, the wife of a farmer in Linn County, Kansas commented that many of the kids in her area "will probably go hungry because they're too proud." Although the Bogans were on the verge of claiming bankruptcy when Public Voice interviewed them, according to Bogan, she had not yet had the courage to go the food stamp office.

RECOMMENDATIONS TO ALLEVIATE FOOD STAMPS STIGMA

We recommend the implementation of public education programs about the importance of the food stamp program, aimed not only at food stamp recipients but also at the community at large.

We recognize that to attack stigma directly is difficult. Coe points out these difficulties in his research, emphasizing the need for positive outreach and informational activities to convince potential applicants that "the more nutritionally adequate diet made available by using food stamps benefits society as a whole as well as the individual." [61] We further encourage the dissemination of these facts to the entire community.

V. INFORMATIONAL BARRIERS/OUTREACH

In 1981, federally mandated outreach was eliminated in the Omnibus Budget Reconciliation Act (OBRA) legislation. Federal funds were no longer available for outreach. As a result, outreach efforts must now be supported either by state and local government or by private groups.

Prior to 1981, the states as required by law and facilitated by matching federal funds, had outreach coordinators. These coordinators saw that federal materials were distributed to local groups and media outlets and spoke publicly on behalf of the program.

Since the elimination of outreach, many private groups have attempted to fill the information gaps in the program by initiating outreach projects. Often this work comes at the expense of their advocacy or service efforts. Generally, these groups are inadequately funded and staffed to carry the burden themselves. Yet even as they are able to do less and as participation declines, state and local advocates recognize the need to do more than ever before.

- **"Eligibility outreach" is critically needed in the food stamp program.**

Outreach opponents frequently argue that there is no need for outreach since everyone knows there is a food stamp program. However, the research demonstrates that many of the persons who are eligible for food stamps but do not get them know the program exists, but do not understand that they may be eligible for it. It is this type of "eligibility outreach" as opposed to general "advertisements" for the program that is critically needed.

Evidence of the need for such outreach is widespread:

- **Coe found that 40% of the eligible nonparticipants in his study reported that lack of information was the most important barrier to participation for them.[62]**
- **The Boston-based Project Bread's Hunger Hotline has found that**

incorrect information regarding eligibility was the most important barrier to food stamp participation among hotline callers.[63]

- **Rungeling et. al concluded from their survey of food stamp eligible households in the rural South than one-third of the eligible nonparticipants were uninformed about their eligibility.[64]**

SIGNIFICANCE TO THE RURAL POOR

- **The elderly and rural populations are most vulnerable to gaps in information about food stamps.**

According to Coe, lack of information about the program was enough to fully account for the differences in participation rates in rural and urban areas.[65] Rural America, it seems, is particularly uninformed on how to apply for food stamps and what it takes to be eligible.

In New Mexico, Mary Garcia of the Home Education Livelihood Program (HELP), a community-based low-income services program, confirmed that "If you don't go out to the community to give it to the people [services], they don't get it."

- **Farmers and other new poor groups are particularly uninformed on potential food stamp eligibility.**

Public Voice has found that lack of outreach keeps many eligible farmers from applying for food stamps. In "Profiles of Rural Poverty", Dina Kelly of Jackson County, Kansas commented, "The food stamp program could do more to let farmers know that they can use it. There are programs for just about everyone else except farmers."

RECOMMENDATIONS TO IMPROVE FOOD STAMP OUTREACH

We recommend vigorous outreach activities, targeted to those least served and in greatest need, and managed, designed and implemented by "outreach coalitions" in each state. Funding should be provided by the federal government and matched by state sources.

VI. BARRIERS UNIQUE TO THE ELDERLY

- **Low participation rates are common among the elderly in all areas of the country.**

USDA research shows that the elderly make up a significant portion of those who are left out of the program. The Department found that only 50% of the eligible elderly participate in the food stamp program compared to two-thirds of all eligibles.[66] Participation is especially low among elderly individuals living alone. Furthermore, the older the eligible persons are, the less

likely they are to participate.[67]

Research by Mathematica Policy Research, Inc., under contract with USDA found that 33% of the eligible elderly who were not in the program mistakenly believed they were ineligible while another 36% did not know they were eligible.[68]

- **Benefit levels nationally are disproportionately low among the elderly.**

Public Voice has found that across all regions, benefits levels are strikingly low for the elderly despite intense needs. For many who receive food stamps at all, the value of the stamps ranges from $13-18 per month.

SIGNIFICANCE TO THE RURAL POOR

The problems faced by the rural elderly in Appalachia typify the plight of many elderly rural poor in the country. According to a recent report by University of Kentucky's Appalachian Center, "Poverty and isolation is exacerbated by problems with transportation and communication. Unable to take advantage of already scarce public transportation because of health conditions and further isolated because of lack of access to telephone, the elderly in Central and Southern Appalachia are often at a disadvantage. Nor do they have access to group living situations."[69]

- **The rural elderly face particular difficulties in accessing the food stamp program.**

The elderly in the four representative states described in "Profiles of Rural Poverty" were often the first to forego the rigorous application process and long trips to the food stamp office, simply choosing not to participate.

As mentioned earlier, Hollonbeck surveyed participating and non-participating elderly in parts of New York, South Carolina and Oregon. Among his sample, 29% of participants and 31% of non-participants stated that getting to the food stamp office was a "big problem."[70] Not surprisingly, non-participants in this study tended to live somewhat farther from the food stamp office than participants.[71]

The Food Research and Action Center (FRAC) in its report "Miles to Go" summarized the obstacles faced by the rural elderly in participating in the food stamp program. They quote a Minnesota food bank director who commented in reference to the elderly population that "They just can't cope with the form; it is too confusing."[72]

RECOMMENDATIONS FOR THE ELDERLY

We recommend continued pilot testing of cash-out pilot projects for the elderly which allow the elderly to receive cash benefits

in lieu of food stamp coupons.[73]

We recommend that federal and state administrations monitor program offices to ensure that the elderly are advised of their rights to in-home or phone interviews and of their eligibility for medical expense deductions.

Because the elderly often do not participate because of the low value of benefits frequently available to them, we recommend that Congress raise the minimum benefit to $20 per month and index that amount to annual increases in the consumer Price Index.

VII. FOOD STAMPS/PUBLIC ASSISTANCE PROGRAMS LINK

- **Food stamp eligibles not receiving AFDC or other social welfare benefits are significantly less likely to be receiving food stamps.**

A number of studies have shown a clear link between participation in other public assistance programs and participation in the food stamp program. Those individuals already part of the social assistance network are more likely to apply and receive food stamp program benefits.

The Center for the Study of Social Policy surveyed female headed households in three states finding that half of the low income working families in New York and over one-third in Georgia mistakenly believed that a family was not eligible for food stamps if it was not receiving AFDC.[74]

Coe concluded that food stamp eligibles were 51.1% more likely to use food stamps if they received either Aid to Families with Dependent Children (AFDC) or General Assistance (GA) benefits. SSI recipients were 32.5% more likely to receive food stamps.[75]

SIGNIFICANCE TO THE RURAL POOR

The link between food stamps and other social welfare programs is especially problematic in rural areas where program participation is generally lower than in urban areas.

The current debate regarding "welfare simplification" must take into account lower program participation rates in rural areas. The rural poor, less likely to receive benefits, are also less likely to benefit from coordination of program benefit distributions.

For example, the Food Stamp Family Welfare Reform Act of 1987 (H.R. 3337) currently before Congress would extend a provision of law requiring that persons eligible for Aid to Families with Dependent Children (AFDC) benefits be categorically eligible to receive food stamps.

The evidence of lower participation rates among the rural poor in

the social welfare network is widespread:

- Public Voice demonstrated that 44.75% of the metropolitan poor received AFDC benefits in 1980 compared to only 19.3% of the rural poor.[76]

- The rural poor receive a disproportionately small share of AFDC income transfer payments. The nonmetropolitan poor received $162 per capita in AFDC benefits in 1983 compared to $552 for the metro poor.[77]

- The relatively low proportion of rural poor receiving welfare assistance is due to the combined effects of the far greater proportion of rural families with either a father present or working parents, and the exclusion from welfare assistance of both those groups in most of the states with high rural poverty rates.[78]

- The greater likelihood of exclusion of two parent households among the rural poor families in many states from AFDC is a principal cause of the urban/rural disparity in program participation.

The rural poor population tends to be older than the urban poor and therefore not eligible for programs targeted to mothers and their children such as AFDC and the Supplemental Feeding Program for Women, Infants and Children (WIC).

RECOMMENDATION

While we support the goals of welfare simplification and recognize the benefits and rationale for categorical eligibility, we caution that the rural poor will benefit less from this legislation and that special considerations may be necessary to extend program benefits to eligibles in both urban and rural areas.

We recommend that Congress require USDA to develop standards to ensure simplicity and understandability in application forms, and develop and distribute to the states a model form covering food stamps, AFDC, Medicaid, general assistance, and energy assistance programs.

Chapter IX

Temporary Emergency Food Assistance Program (TEFAP)

INTRODUCTION

The U.S. Department of Agriculture in November 1987 announced that government supplies of certain commodities (cheese, butter, powdered milk and rice) have dropped. As a result, the amount of commodities available for distribution under the TEFAP program in 1988 will likely only be half of what it was in 1987.[79] USDA attributes this overall decline to large decreases in surplus dairy stocks. According to the Department, the drop in surplus commodities is the result of the nation's agricultural supply moving closer to actual demand.[80]

These projected declines in TEFAP distribution are causing great concern among anti-hunger advocates and food distribution agencies. They fear a void in available food assistance provisions that will most likely appear when TEFAP is cut. Unless viable alternatives are put forth to either strengthen TEFAP through additional purchases of commodities or to expand and improve other food assistance programs such as food stamps, millions of people will lose a major food source that they have come to depend on. Ellen Haas, Executive Director of Public Voice, commenting on the projected cuts, said that "Our nation's poor should not be the victims of unbalanced dairy and agricultural policies. At a time when over 30 million Americans live below the poverty line and when the proportion of rural Americans in poverty has risen dramatically in recent years, the Reagan Administration must be held accountable for their lack of action to end hunger in America."[81]

This section will examine the role of TEFAP in supplementing the diets of needy Americans, focusing particularly on program utilization in rural areas. These issues are especially timely give the Administration's November announcement of severe reductions in the program. We will also discuss some of the problems faced by state and local distribution agencies in meeting the emergency food needs of rural areas. Finally, general recommendations for the future are presented.

INTRODUCTION TO THE PROGRAM

HISTORY

Like the original commodity distribution programs initiated during the Depression years of the 1930's, TEFAP evolved in the early 1980's as a response to embarrassing buildups of surplus

food, often rotting in government warehouses while needy people went hungry. Unlike these previous programs, TEFAP has become much more than a sporadic emergency handout program. According to a recent report by the Food and Nutrition Service (FNS), TEFAP is perceived by approximately 40% of program recipients to be a regular source of food.[82]

TEFAP began as the Special Dairy Distribution Program in late 1981, becoming the first program since 1974 to allow both the food stamp program and a commodities program to operate in the same areas. The Special Dairy Distribution Program became the Temporary Emergency Food Assistance Program (TEFAP) in 1983 with the passage of the Temporary Emergency Food Assistance Act of 1983 included as part of the Jobs Bill. This 1983 legislation transformed a program initially conceived as a one-time handout of surplus dairy stocks into a more permanent component of the federal food assistance network.

Due to the national increases in poverty which occurred during the early 1980's and the resulting growth in demand for emergency food, the program has experienced steady and substantial expansions since its inception in 1981. Currently an average of between 15 and 18 million needy people are served by TEFAP each month.[83] In FY 1986, the program distributed 410.3 million pounds of cheese, 70.6 million pounds of butter, 93.5 million pounds of nonfat dry milk, 127.3 million pounds of flour, 37.8 million pounds of cornmeal, 130.8 million pounds of rice and 78.0 pounds of honey.[84]

PROGRAM ADMINISTRATION

TEFAP is administered at the federal, regional, state and local levels. At the federal level, USDA purchases, processes and packages the surplus commodities and supervises transportation of commodities to designated state delivery points. The Department provides some administrative funding assistance to help defray state and local costs. State distributing agencies (SDAs) are responsible for overall state administration of the program. SDAs operate through regional umbrella organizations called Emergency Feeding Organizations (EFOs). Finally, local organizations distribute the commodities directly to recipients at distribution sites. Eligible individuals come to these sites to pick up their food. These distribution sites are generally operated by a largely volunteer staff.[85]

After receiving the federally distributed commodities, the states have substantial discretion in administering the program. SDAs, among other responsibilities, establish eligibility criteria for the program, determine a system for storing and transporting commodities within the state and maintain a monitoring system of the EFOs. The EFOs, in turn, abide by the regulations set out by the SDAs. Most EFOs are private nonprofit organizations or public organizations that were already in existence prior to TEFAP such as food banks and community action agencies. Some

EFOs are both intermediaries for the state and actual distribution sites. At the local level, distribution sites are made up primarily of churches and community agencies.

ALLOCATION FORMULA

Commodities are currently allocated to the states on the basis of a formula weighted 60 percent on the number of people in poverty in the state and 40 percent on the number unemployed, revised semi-annually. States are notified of their maximum allotments by FNS. The states, in turn, inform the FNS regional offices of their requests up to the maximum allowable amount. Not all states, however, order their maximum allotments based on this formula, while some request amounts beyond their assigned allotments. Unused commodities resulting when states order less than their maximum allotments are reallocated to states that need additional supplies.[86] In the first quarter of FY 1987, for example, 49% of the states requested and received additional cheese.[87]

COMMODITY PACKAGES

The commodity distributed most frequently, according to the FNS study, was cheese, followed by butter, rice and then honey, flour, dry milk and cornmeal in that order. The median TEFAP "package" contains three commodities with an average retail value of $22.67.[88]

PROGRAM ELIGIBILITY

While all recipients of TEFAP commodities must meet a means test to qualify, the level of need required varies from state to state. Most states have adopted a cutoff of either 130% or 150% of the poverty threshold. In several states, applicants may establish eligibility by demonstrating their participation in other public assistance programs such as food stamps or Aid to Families with Dependent Children (AFDC).[89]

PARTICIPATION

The Food and Nutrition Service (FNS), by congressional mandate, collected information on TEFAP participation in 1986. They found that in October 1986 approximately 5 million households or 15 million persons received TEFAP commodities. 38% of these households were elderly (headed by a person 60 years of age or above) and 48% included children under 18. Less than half of these families (41%) were also receiving food stamps.[90] The study also found that three-quarters of recipient households had incomes at or below poverty, and 91% had incomes at or below 130% of poverty.[91]

The FNS report found that 41% of TEFAP recipients considered the program as a regular source of food, 30% considered it as a place to get food from time to time, 17% said it was a temporary source and 11% said they used the program only for emergencies.[92]

SIGNIFICANCE TO THE RURAL POOR

FNS's findings underline the critical importance of the program in rural areas. Their study found that approximately half of the TEFAP distribution sites were located in non-urban areas. 55% of all households which received commodities from the program were served at non-urban sites.[93]

In an informal phone survey, Public Voice contacted a representative sample of TEFAP directors, including one from each of the five main regions of the country; the West, Midwest, Deep South, Southeast and Northeast. We questioned each Director on rural participation levels in their states. We also examined the characteristics of the program which, unlike the other food assistance programs, have led to more equitable distribution of TEFAP commodities between rural and urban populations.

The results of our discussions are presented below. The names of the state directors and states have been kept anonymous at their request.

RESULTS OF TEFAP SURVEY

- **The rural poor and near-poor depend heavily on TEFAP, often as their sole source of food assistance.**

The state TEFAP directors participating in the survey reiterated that TEFAP, unlike many other food assistance programs, is heavily utilized in rural areas. All of the Directors asserted that TEFAP commodities, with minimal exceptions, reach rural and urban areas equally. The Directors unanimously attributed high rural participation to the great demand in rural areas.

While each state contacted in the survey reported widely different methods of distribution, each in its own innovative way has been quite effective in distributing commodities to all regions including remote areas within their state. State methods of distribution vary widely. In one state, for example, only one of the EFOs is a food bank whereas another state depends almost exclusively on food banks for commodity distribution. While one Midwestern state conducts mass distributions four times/year, another has been very successful in meeting rural needs by contracting to senior citizen centers and schools where the state is already delivering food.

- **Any negative stigma associated with TEFAP among the rural population appears to be much less than with other assistance programs, such as food stamps.**

A southern Director argued that the lack of a stigma associated with TEFAP allows for widespread distribution of the program to rural areas. Farmers and other rural residents who are in trouble, he continued, are more likely to use TEFAP than food stamps. He noted that for farmers especially, the stringent income qualifications and paperwork required in applying for food stamps is often not worth the hassle.

A TEFAP director in the Midwest agreed that many rural poor do not qualify or believe they do not qualify for the other food assistance programs and therefore depend on TEFAP commodities. He added that mass distribution erases much of the stigma involved with the other programs.

A southeastern TEFAP Director has found that people in her state tend to have more positive attitudes toward TEFAP than other programs. She commented that TEFAP recipients don't have to answer a lot of intimidating questions and that it's easier to sign up for TEFAP than for food stamps.

- **In many cases, smaller communities get more involved with the program, making it easier to find volunteers.**

TEFAP is heavily dependent on volunteer labor. One state Director, for example, explained that about 99% of program staff in his state is volunteer. This dependency in some cases can be a liability -- shortage of volunteer help without guarantee of financial support for employees can easily shut down a distribution operation.

A number of the Directors have found that it is easier to recruit volunteers in rural or small communities. However, some worry that their volunteer forces are beginning to "burn out", not having realized the time investments required to keep the program in operation.

- **Local involvement in the program helps spread news of the program through word of mouth, an especially effective outreach tool in small communities.**

BARRIERS TO RURAL PARTICIPATION

It is important to note that regardless of the effectiveness of TEFAP in serving the rural poor, it still falls far short of reaching all potential eligibles. Additionally, the program should be viewed only as a supplement to the other food assistance programs. One state TEFAP director emphasized this point--TEFAP, she noted, should not be seen as a key program on its own. There is not enough variety in the program. Cheese, butter and honey can supplement the diets of needy households, but cannot adequately meet their total nutritional needs. Although the commodity packages contribute significant amounts of several

essential nutrients including calories, calcium, vitamin A and D, to the nutrients available to households which receive them, they fall far short of providing a complete and balanced diet.

Despite the effectiveness of TEFAP in reaching rural areas, the directors pointed out a number of unique barriers to meeting rural needs. In addition, they discussed their overall concerns in regard to program administration and their concerns over the future of the program.

The key rural problems mentioned in the survey are presented below:

- **A lack of adequate storage facilities is an especially critical problem in rural areas.**

The most critical problem noted by each director surveyed was in finding quality storage conditions in rural areas. Commercial and/or public facilities in these areas are generally limited and less readily available than in larger towns or cities. One of the Midwestern Directors surveyed explained that while they are committed to meeting needs throughout the state, they have found that it is harder to reach pantries in rural areas. The lack of commercial facilities means they have to be more careful about accepting food in large quantities--This often results in shortages and overall difficulties in managing operation of the program.

Dairy products, which are generally the most popular commodities among TEFAP recipients also require adequate storage and/or refrigeration. Butter, in particular, is a problem in rural areas where storage is less readily available. In one of the states surveyed, they have been unable to distribute butter where there is no refrigeration. Almost none of the rural distribution sites, as a result, receive the surplus butter.

- **The temporary nature of the program prohibits adequate investment in storage and warehouse facilities.**

Only after September 1983 when TEFAP was extended for two years did the government begin to permit investment in capital equipment. However, food banks, community action agencies and other distribution sites are still expected in most cases to accommodate TEFAP commodities with already existing facilities.

Despite some increased federal flexibility on the investment issue, many organizations are justifiably reluctant to invest in facilities for a program that is by definition "temporary." Emergency feeding organizations, according to the state directors, often find that vendors and trucking companies are hesitant to enter into contracts not knowing if the program will continue.

- **The greater distances involved in distributing commodities to rural areas often pose barriers to rural participation.**

The state directors in the survey commented that rural recipients generally have to drive to reach distribution sites. As a result of the greater distances, they are more affected by the scheduling and location changes that regularly occur with the program.

According to a report by Lipsky and Thibodeau, "The distances involved in moving surpluses around rural areas create severe problems for organizations attempting to "shop" at food banks or pick up products at distribution centers." [94] They cite the example of Montana where the typical community action program has a distribution range that exceeds 100 miles in radius. Organizations in this rural state must expend an extraordinary amount of effort to accomplish distribution tasks that are routine for its metropolitan counterparts.[95]

- **There is no higher reimbursement rate to compensate for the higher costs of distributing commodities in rural areas.**

Several state Directors expressed dissatisfaction over the lack of a higher reimbursement rate for rural areas. Rural organizations incur significantly higher expenses in moving goods while receiving the same reimbursement as urban food banks with lower transportation costs.[96]

FNS estimated in their report that states have about 88 percent of total costs covered by federal reimbursements. The higher costs required to distribute commodities in rural areas can make it difficult for states to fund the remaining costs of the program. Despite the federal commitment to help defray costs, many states end up falling behind. In a May 1985 study, the Food Research and Action Center (FRAC) found that 31 states were experiencing funding shortfalls.[97]

- **Overall, TEFAP is based on a "temporary" philosophy which often prohibits adequate commitment at all levels.**

All of the Directors in the survey expressed their frustration with the temporary nature of the program and the unpredictability that results. Due to the year-to-year authorization set-up, the program is "run somewhat on a shoestring" according to one Director.

Another director in the survey argued strongly that USDA feels that the intent of the program-getting rid of dairy surpluses-has been met. The latest actions by USDA seem to confirm this view. Congress needs to recognize, she asserted, that TEFAP is a critical component of overall emergency food efforts and should have a higher priority. Congress and the Administration, she continued, must give TEFAP a higher priority (without taking the

surpluses from the schools) and establish guaranteed minimum distribution allocations if necessary.

CONCLUSIONS AND RECOMMENDATIONS

This report has emphasized the important role of TEFAP as a supplement to other food assistance programs. In rural areas, especially, TEFAP serves this purpose due to the disproportionate underutilization of other federal food assistance programs such as food stamps.

The TEFAP program's success in serving rural areas should be a model for increasing coverage in rural areas of other food assistance programs. TEFAP administrators have utilized existing local resources throughout their states to reach out to more remote areas.

Despite their success, improvements are necessary to expand program coverage. We recommend:

- **Significant improvements in storage facilities in rural areas. Warehouses that can accommodate perishable goods are particularly critical.**

- **Increased transportation funds to be made available for rural program sites.**

- **An increased reimbursement rate for rural programs to help compensate for the greater costs associated with program operation in rural areas.**

Most importantly, we call on Congress and the Administration to acknowledge the importance of TEFAP and to understand the depth of the need throughout the country for emergency food provisions such as those provided by TEFAP. While food banks and other distributing agencies work tirelessly to meet these needs, they are severely limited in resources, staff and funding. (See food bank section).

Our nation's poor should not be the victims of fluctuations in agricultural commodity policies and supplies. Greater government commitment is needed to maintain TEFAP and to help alleviate demand for emergency food by improving the coverage of other food assistance programs. Expansions and improvements in the programs such as food stamps set up to meet the long-term food assistance needs of the poor are critical. Robert Fersh, Director of the Food Research and Action Center (FRAC), noted that "The [present] situation [TEFAP cuts] underlines a basic need to improve federal food assistance programs. Expansion and outreach in the food stamp, WIC, child nutrition and other federal food programs can provide a more systematic approach to alleviating hunger than relying on whether or not we have farm surpluses in a given year."[98]

Current indications that emergency food supplies will be halved in the coming year are cause for great concern. Although the program was set up as a temporary one, the government must ensure that the nation's hungry will not be abandoned once supplies have been depleted. The federal government must be prepared and committed to addressing the increased emergency food needs which will arise if the proposed cuts occur. The impact on the rural population would be particularly severe. While TEFAP should be considered only as a supplement to these programs, it has become a critical supplement, one that many households will have difficulty living without.

Chapter X
Food Banks

INTRODUCTION

Perhaps the most visible signs of hunger in the 1980's are the long lines of people waiting at soup kitchens and food pantries for emergency food packages and meals. For the agencies and individuals trying to meet heightened food assistance needs, demand continues to overwhelm available supplies.[99]

This increased demand for emergency food provisions during the 1980's can be traced to a number of causes--the Recession of the early part of the decade and high unemployment rates helped to create a class of "new poor" which included many previously secure blue-collar middle class families. Lipsky and Thibodeau point out that "many families found themselves visiting soup kitchens and food pantries for the first time because they were unable to buy enough food."[100] During this same period, the Omnibus Reconciliation Acts of 1981 and 1982 legislated severe cuts in the federal food assistance programs. In addition, a burgeoning homeless population joined the emergency food lines in alarming numbers.

The economic decline of the early 1980's hit farmers and other rural residents especially hard. And rural areas, with their sparse populations frequently located large distances from urban centers, have been particularly difficult to reach with emergency food provisions. Clearly, the need is there, but the funds and resources to meet this need are often not available.

In this report, we will examine the issue of emergency food distribution to rural areas. The report is based on a survey, conducted by Public Voice of the Second Harvest Food Bank Network members. These food bank directors with direct knowledge and sensitivity to emergency food distribution issues were asked to isolate the key barriers they face in providing food to rural areas. Finally, we will present the directors' recommendations for improving emergency food service to rural areas.

SECOND HARVEST FOOD BANK NETWORK

This report will focus on the major source of emergency food throughout the country in both urban and rural areas: the Second Harvest Food Bank Network. Second Harvest is the second largest supplier of food for emergency purposes, the largest being the

federal government. (See TEFAP report for discussion of the government food distribution network).

The Second Harvest Food Bank Program was established in 1979 to channel surplus food to the needy with the knowledge that much of this food would otherwise be wasted. The food banks in the Second Harvest Network distribute food mainly from industry and government donations to agencies which serve the poor. In dealing with industry, Second Harvest works at the national level and the food banks work locally to identify and contact the owners of a particular food resource that may be in surplus due to problems such as over-production and transportation mishaps. The food bank officials, in turn, solicit these food owners to donate the surplus food to charity. The commodities are then incorporated into a delivery system which distributes the food to emergency meal programs, church pantries, shelters, half-way homes and other charitable organizations.

In addition, many Second Harvest food banks (nearly 50%) distribute USDA commodities under the TEFAP program, and FEMA (Federal Emergency Management Agency) funded food.

In 1986, the Second Harvest Network distributed over 350 million pounds of food to more than 38,000 charity centers in the United States. Food is distributed at a minimal charge to charitable agencies which must then distribute the food at no cost to needy individuals. These are "shared maintenance" charges which help keep the food banks in operation.[101] And by all measurements, demand continues to grow.

SIGNIFICANCE TO THE RURAL POOR

The barriers to reaching rural and more remote areas with emergency food are varied and difficult to overcome for many organizations with limited resources. Agencies attempting to serve rural areas face, among other obstacles, higher costs for transportation, storage, and long distance phone calls. Unit costs are necessarily higher because there are no economies of scale.

The Administrators at Second Harvest's national office are aware of these barriers to reaching rural areas and have done a great deal to facilitate distribution to more remote regions of the country. Administrators in the national office report that in general, their food banks and affiliates successfully cover most of the country including rural areas. The national office is currently working to confirm this assessment and will have a map available early next year showing the locations of all network members, affiliates and subsidiary distribution organizations.[102]

Historically, Second Harvest has encouraged member food banks to expand service to the greatest extent possible given adequate food supplies and reasonable costs for expanding such services. They are currently attempting to define food bank service areas

in a way that would require no agency to have to drive more than 60 miles to pick up supplies. In addition, Second Harvest's national office is encouraging food banks to evaluate the concept of establishing branches in underserved population centers.

Despite Second Harvest's efforts to encourage equitable distribution of food supplies, they continue to encounter some difficulties in meeting their goals. Meeting the needs of rural areas is still in many cases too costly for food bank members.

We surveyed the 82 certified Second Harvest food banks on rural issues, asking them specifically what problems they have encountered in meeting the needs of rural areas and what recommendations they have for improving emergency food services to unserved rural areas. We surveyed the 82 network members only. There are also currently 120 Second Harvest affiliates and many more subsidiary distribution organizations. A copy of the survey is included in Appendix I. Over 2/3 (66 of 82) of the network's members responded to the survey with the results presented below:

SURVEY RESULTS

In response to the question, "Have you encountered specific problems meeting the needs of rural areas? If so, please check or detail these problems briefly":

- **50 of the 66 network respondents listed "transportation costs" as a problem;**
- **46 listed "excessive distances"**
- **41 listed "lack of vehicles for transport"**
- **36 listed "lack of storage facilities"**
- **23 listed "lack of volunteer support"**
- **22 listed "lack of community support"**
- **19 listed "storage costs"**
- **15 listed "difficulties with publicizing program"**
- **10 listed "perception that number of needy persons per square miles does not merit program"**

These results provide a strong indication of the types of problems encountered by the food bank network in distributing food to rural areas. Transportation costs stand out as the most significant problem. Excessive distances and transportation costs are also related to storage problems as perishable goods are difficult to transport and store. Smaller communities in

rural areas are less likely to have adequate storage facilities for these goods.

Many of the respondents provided us with greater detail about the problems they have faced in reaching rural areas:

A Southern food bank director explained that rural areas often do not have any volunteer organizations except for churches. These churches are generally small and few have the resources to reach out beyond their own members.

Those food banks that have tried to reach out to rural areas often encounter difficulties in finding rural programs sufficiently organized to receive and store food. While there are rural organizations trying to meet the needs of these communities, most lack adequate funding and volunteer support and have at best limited storage space that is generally inadequate for storing refrigerated or frozen products.

According to one director, because rural areas are often remote and sparsely populated, it's hard to line up volunteers and even more difficult to reach the rural poor who may have to travel many miles just to get to a food pantry. In most of these areas, public transportation is extremely underdeveloped or nonexistent.

A couple of the respondents commented that service to some rural communities may simply be impossible as the cost per person is too high.

RECOMMENDATIONS

A summary of the recommendations put forth by the survey respondents is presented below. The food bank directors participating in the survey agreed that:

1) **Inadequate funding is the most critical barrier to expanding and improving services.**

A Northwestern director commented that without increased support both from the Department of Agriculture (USDA) and private donations, adequate servicing of rural areas is simply not cost effective.

2) **In order to meet the needs of rural areas and unless funding is expanded, the food bank network may have to redistribute resources from urban to rural areas.**

A Virginia director noted that currently most funds go to metropolitan food banks. It is important for the urban agencies to understand, according to a Minnesota food bank director, that there are also poor needy people in the rural areas.

A Florida director suggested special grant funds to allow for additional costs when attempting to serve areas 100-150 miles from the central distribution point.

3) There is a need to increase the amount and variety of food available before expanding services.

A Texas food bank director cautioned that in order to serve expanded territory, food banks would need to increase the amount of donated product. There is little benefit, he commented, in establishing a "false promise" to add territory without the food to provide for them.

4) Improved transportation services are essential to improved services in rural areas.

An Arizona food bank director recommended massive injections of funding for vehicle purchases as essential for meeting the needs of rural areas. A central California director mentioned that a regional transportation network is currently being developed in his region.

A number of the directors recommended the provision of some public funding support for increased transportation services.

5) Improved storage facilities in rural areas is critical, especially for perishable items.

A Maryland Agency suggested the development of start up funds or seed money for "mini" food warehouses to be scattered throughout the states. A director in the Deep South recommended recruiting churches and other community organizations to offer building and storage space. The need for frozen and refrigerated storage space to handle the more nutritious frozen and perishable products was mentioned by a number of respondents.

6) Satellite distribution areas closer to agencies distribution areas and their clients are critically needed.

Many of the food banks are already experimenting with satellite distribution centers. The food bank in Jacksonville, Florida, for example, is establishing food outlets in rural counties and actively recruiting non-profit agencies to help distribute the food.

One remote Minnesota affiliate has a program with the St. Paul Central Food Bank to operate a monthly delivery system to "drop points" in southwest Minnesota. Although the system gets complicated and is difficult to manage, it does help get food out to rural areas according to the developers of the plan.

The Oklahoma City Food Bank has had success trucking food out to

rural areas on a specific schedule. These services help cut down on the transportation expenses of smaller rural agencies. Larger agencies like the Salvation Army are encouraged to coordinate pick-ups with several smaller agencies.

7) "Rural food bank networking" must be actively encouraged and promoted.

A Pennsylvania Food Bank Director suggested that multiple areas cooperate through shared transportation costs and joint set-up of central distribution sites. Many respondents mentioned rural churches as critical players in these prospective networks.

8) Policymakers must work to improve public assistance programs to relieve the burden on the private emergency food providers.

A California director summarized this issue, calling on the government to recognize that emergency help is just that, and that people need ongoing, more dependable assistance. Congress should mandate a well fed population as a top national priority, he continued.

9) Increased food bank outreach and publicity efforts are essential.

A number of respondents suggested increased publicity about food banking and greater dissemination of information through USDA, the Office of Health and Human Services (HHS) and other federal agencies. In order to reach the rural needy, an Ohio director pointed out, intensive outreach efforts are necessary. Rural residents have to travel long distances to pick up food and outreach efforts are needed to alert these people of the services available.

Outreach can also take the form of community organizers going out to identified areas and working with local people to set up food pantries. The food bank in Harrisburg, PA was recently granted four VISTA volunteers to work on outreach to rural areas. A major goal of these new volunteers is to help communities organize new feeding programs. Outreach can also play an expanded role in attracting greater food and financial donations.

10) Improve community support in rural areas.

A number of respondents commented on the need to recruit greater community support to operate the programs locally and to increase private donations.

The Hawaii Food Bank Director recommended the establishment of neighborhood boards to help create and secure places to store and

distribute food.

Other suggestions included:

- Establishing "pantry networks" in rural areas.
- Creating moveable warehouses (trucks) to serve more rural programs.
- Starting up part-time food pantries in rural areas.
- Developing on-site feeding programs in some of the smaller communities.

CONCLUSIONS

The results of our survey of the Second Harvest Network members demonstrate that in general, the food banks and their affiliates are aware of the unique problems involved in meeting the emergency food needs of rural areas. Many have initiated innovative programs to distribute food to these areas. Despite these efforts, fundamental problems remain in serving rural needy populations adequately.

While the food banks work tirelessly to feed the hungry in their areas, outreach to rural areas often requires even greater investments of time and scarce resources. The private sector cannot carry the burden alone--public assistance programs must be expanded and improved to help meet the need. (See Public Voice's reports on summer food service program for children, food stamps and TEFAP).

In the interim, needy individuals who reside in rural areas will continue to rely on emergency food provisions. We call for careful consideration of the problems and recommendations outlined in this report by Congress, the Administration, advocates and emergency food suppliers and agencies to better serve the needy in rural America.

APPENDIX I

Dear Director:

As part of Public Voice's ongoing research and advocacy work on food assistance program in rural areas, we would appreciate your cooperation in filling out the following survey and returning it to us no later than August 31.

The information you provide will be an integral part of our current Ford Foundation study on barriers to food assistance in rural America.

SURVEY

1) How many agencies did you serve in your most recent survey period?

   When was this?

2) Please list the counties served by these agencies and/or darken in these counties on the enclosed maps. Please indicate if we have left out all or part of a state in your area.

3) Are there any counties or cities in your service area that are "unserved" by your program?

4) As far as you know, are these areas served by another Second Harvest Food Bank or other type of emergency food provider? If so, please specify the organization by name.

5) Have you encountered specific problems meeting the needs of rural areas? If so, please check or detail these problems briefly.

- o Lack of storage facility ____
- o Storage costs ____
- o Transportation costs ____
- o Lack of vehicles for transport ____
- o Lack of volunteer support ____
- o Lack of community support ____
- o Excessive distances ____
- o Perception that number of needy persons per square mile does not merit separate program ____
- o Difficulties with publicizing program ____
- o Other (please specify) ____

6) What would be your recommendations for improving emergency food service to unserved areas in general and more specifically to rural areas?

Please feel free to include any other information or comments that help characterize difficulties you face in providing food to needy rural residents.

Thank you for completing this survey. If you have any questions, please call either Deanne Loonin or Jeff Shotland at 202-659-5930.

Sincerely,

Jeffrey Shotland
Director of Research

Deanne Loonin
Research Assistant

NOTES: SECTION II

1.These are U.S. Census Bureau poverty data released on July 30 as reported in: Food Research and Action Center (FRAC), "32.4 Million Americans Fall Below Poverty Line." Foodlines, Vol.V No. 8, August 1987.

2.U.S. Department of Commerce, Bureau of the Census, General Social and Economic Characteristics: U.S. Summary, 1980. These poverty data were the most recent available for children broken down in metropolitan and nonmetropolitan categories.

3.Senator Daniel Patrick Moynihan, "Children: Hungry and Poor", in Food Research and Action Center (FRAC), Foodlines, Vol. IV No. 3, May 1986.

4.See for example, Dietz, W. Statement Before the House Select Committee on Hunger and the Energy and Commerce Subcommittee on Health and the Environment, May 223, 1985; Jelliffee, D.B., the Assessment of the Nutritional Status of the Community World Health Organization, Geneva 1966; Latham, M., Protein-Calorie Malnutrition in Children and its Relation to Psychological Development and Behavior. Physiological Reviews, 54 (3), 1974.

5.Public Voice for Food and Health Policy, Rising Poverty, Declining Health: The Nutritional Status of the Rural Poor, February 1986, p. 103.

6.The School Breakfast program serves less than one-tenth the number of children served by the School Lunch Program. A campaign to expand the program was recently initiated by the Washington-based Food Research and Action Center (FRAC).

7.U.S. Department of Agriculture, Food and Nutrition Service, Office of Governmental Affairs, "The Summer Food Service Program", March 1986.

8.Congressional Research Service, "Background on Provisions of the Summer Food Service Program Relating to Participation in Rural Areas." Unpublished report submitted to Senate Committee on Agriculture, Nutrition and Forestry, October 9, 1987.

9.The Summer Feeding total listed in Table 1 is slightly lower due to the unavailability of data from certain states. The 1.46 million figure is the final 1985 ADP total as reported by FNS.

10.The Presidents Task Force on Food Assistance, "Report Of The President's Task Force on Food Assistance",, January 1984, p. 24.

11.These figures are cited in House of Representatives, "Extending and Improving the National School Lunch Act and the Child Nutrition Act of 1966", Report #98-633 to accompany H.R. 7.

12.In fact, most of the remaining states responded as well, however, for a variety of technical reasons their data could not be used in this analysis. For the purposes of our study, the District of Columbia was included in the state total.

13.The metropolitan/nonmetropolitan distinction was used rather than rural/urban due to FNS practice of combining all rural data with data for self-preparation sites. The metro/nonmetro distinction can be misleading. Many of the participants in nonmetro counties may be from urban areas. Similarly, children living in rural pockets of metro counties and participating in programs there would be counted in the metropolitan total. See appendix I for further discussion of these issues.

14.This information was collected from phone conversations with the New York FNS Regional Office. In addition, the office sent us basic information on the program in New York.

15.Limitations in the data preclude our ability to determine the actual percent of poor or low-income and therefore eligible children who participate in the program. This is because an unknown proportion of participants are from families who do not qualify for free or reduced price lunches and are therefore not poor or low-income. In this report however, we will refer to what is actually the ratio of ADP to the number of low-income children as the percent of low-income children served.

16.Although this indicates far greater urban coverage, that only 10% of needy urban children are served is also indicative of severely unserved need.

17.This is based on the information available and does not include data from Illinois, Louisiana, Missouri or New York. In addition, it is important to emphasize that many of the programs in nonmetropolitan counties actually serve urban children in camps. In addition, rural sites are located in metropolitan counties.

18.See House of Representatives, "Extending and Improving the National School Lunch Act and The Child Nutrition Act of 1966", Report 98-633 to accompany H.R. 7.

19.Congressional Research Service, "Background on Provisions of the Summer Food Service Program Relating to Participation in Rural Areas". Unpublished Report submitted to Senate Committee on Agriculture, Nutrition, and Forestry, October 9, 1987.

20.Data on outreach provided by Jeanne Colegrove, R.D., Manager, New Mexico's Child Care Food Program.

21.Community Nutrition Institute, "Summer Food Program: Restrictions Limit Use", Nutrition Week, Vol. XVII No. 29, July 23, 1987, p.2.

22.Congressional Research Service, "Background on Provisions of the Summer Food Service Program Relating to Participation in Rural Areas". Unpublished Report submitted to Senate Committee on Agriculture, Nutrition, and Forestry, October 9, 1987.

23.For the 1987 summer program, maximum cash per-meal reimbursement rates were 43.25 cents per snack, 92 cents per breakfast and $1.65 per lunch.

24.Congressional Research Service, "Background on Provisions of the Summer Food Service Program Relating to Participation in Rural Areas". Unpublished Report submitted to Senate Committee on Agriculture, Nutrition, and Forestry, October 9, 1987.

25.According to the House Education and Labor Committee report on the 1977 legislation, "The committee has adopted this amendment since there are some situations in which it is impractical to use data based on geographic areas to determine eligibility for the program, such as summer camps, large sparsely populated rural areas, and middle-and high-income areas where there are concentrations of needy children.
Cited in Congressional Research Service, "Background on Provisions of the Summer Food Service Program Relating to Participation in Rural Areas". Unpublished Report submitted to Senate Committee on Agriculture, Nutrition, and Forestry, October 9, 1987.

26.Food Research and Action Center, "Fact Sheets on the Federal Food Programs", September, 1987.

27.U.S. Department of Agriculture, Food and Nutrition Service (FNS), "Summary of Food Stamp Program Operations." (Food stamp participation data is from January 1980-1986).

28.Robert Greenstein, Center on Budget and Policy Priorities, "Why 10 Million Low Income Americans Do Not Receive Food Stamps: A Review of the Research Literature", September 1984, p.1.

29.Robert Greenstein, Center on Budget and Policy Priorities, "Why 10 Million Low Income Americans Do Not Receive Food Stamps: A Review of the Research Literature", September 1984, p.1.

30.General Accounting Office, "Food Stamp Program: Evaluation of Improper Denial or Termination Error Rates", October 1987, #RCED-88-12.

31.Physician Task Force on Hunger in America, "Hunger Counties 1986: The Distribution of America's High-Risk Areas", January 1986.

32.The terms metropolitan/nonmetropolitan and urban/rural are used interchangeably throughout the report. All are based on the Bureau of Census definitions of metro and nonmetro areas.

33.See Public Voice reports, "Rising Poverty, Declining Health: The Nutritional Status of the Rural Poor", February 1986 and "Profiles of Rural Poverty: Facing Barriers to the Food Stamp Program", July 1987.

34.Physician Task Force on Hunger in America, Harvard School of Public Health, "Increasing Hunger and Declining Help: Barriers to Participation in the Food Stamp Program", May 1986, p.70.

35.Physician Task Force, "Increasing Hunger and Declining Help", p. 69.

36.Darrell Hollonbeck, MPH and James C. Ohls, PhD, "Participation Among the Elderly in the Food Stamp Program", The Gerontologist, Vol. 24, no. 6, 1984, pp.616-621.

37.U.S. House of Representatives, Select Committee on Hunger, "Recommendations for Action Against Hunger", September 1986, pp.6-8.

38.Presidents Task Force on Food Assistance, "Report of the Presidents Task Force on Food Assistance", January 1984, p.43.

39.Presidents Task Force, p. 43.

40.Physician Task Force on Hunger in America, "Increasing Hunger and Declining Help", p.58.

41.Physician Task Force, "Increasing Hunger and Declining Help", p. 88.

42.Presidents Task Force on Food Assistance, "Report of the Presidents Task Force on Food Assistance", January 1984, p. 21.

43.Marc Bendick, "Failure to Enroll in Public Assistance Programs", Social Work, July 1980, p. 272. Cited in Physician Task Force, "Increasing Hunger and Declining Help", p. 91.

44.Physician Task Force, "Increasing Hunger and Declining Help", p. 87.

45.Presidents Task Force, p. 21.

46.John Bickerman, Robert Greenstein, Center on Budget and Policy Priorities, "Research Findings on Monthly Reporting Systems and Their Implications for State Administrators", November 1983, pp.9-12.

47.Bickerman and Greenstein, p. 15.

48.Bickerman and Greenstein, p. 15.

49.Telephone Conversation with Georgia Food Stamp Program Expert-Based on conversation with Georgia Department of Human Resources Administrator.

50.Physician Task Force, "Increasing Hunger and Declining Help", p. 109.

51.National Research Council, Rethinking Quality Control: A New SYstem for the Food Stamp Program, ed. Dennis P. Affholter and Frederica D. Kramer. (Washington, D.C.: National Academy Press, 1987).

52.National Research Council, Rethinking Quality Control: A New System for the Food Stamp Program.

53.Congressman Panetta discussed this report in a copy of a letter dated August 6, 1987 and sent to The Honorable Clifford L. Allenby, Secretary, California Health and Welfare Agency.

54.General Accounting Office, p. 27. On this subject, also see among other reports, GAO/RCED-87-80BR, April 2, 1987, Food Stamp Program: Trends in Program Application Participation and Denials; GAO/RCED-85-98, April 12, 1985, Quality Control Error Rates for the Food Stamp Program; GAO/RCED-84-155, April 25, 1984, Federal and State Liability for Inaccurate Payment of Food Stamps, AFDC and SSI Program Benefits; GAO/RCED-87-4, October 30, 1986, Food Stamp Program: Statistical Validity of Agriculture's Payment Error-Rate Estimates; GAO/RCED-87-51, October 30, 1986, Food Stamp Program: Restoration of Improperly Denied or Terminated Benefits; GAO/RCED-86-195, September 19, 1986, Food Stamp Program: Refinements Needed to Improve Accuracy of Quality Control Error Rates.

55.Richard D. Coe, "Nonparticipation in Welfare Programs by Eligible HOuseholds: The Case of the Food Stamp Program", Journal of Economic Issues, Vol. XVII, No. 4, December 1983, p. 1038.

56.Physician Task Force, "Increasing Hunger and Declining Help", p. 79.

57.Physician Task Force, "Increasing Hunger and Declining Help", p. 80.

58.Coe, p. 1039.

59.Physician Task Force, "Increasing Hunger and Declining Help", p. 81.

60.Physician Task Force, "Increasing Hunger and Declining Help", p. 81.

61.Cited in Robert Greenstein, Center on Budget and Policy Priorities, "Why 10 Million Low Income Americans Do Not Receive Food Stamps", September 1984.

62.Coe, p. 1038.

63.See Project Bread Food Stamp Hotline, "Executive Summary of the Final Report", Report Period: March 12-December 31, 1986, Boston, MA.

64.Brian Rungeling et. al, Employment, Income and Welfare in the Rural South. (New York: Praeger Publishers, 1977), cited in Coe, p. 1037.

65.Coe, pp. 1050-1051.

66.Greenstein, "Why 10 Million Low Income Households Do Not Receive Food Stamps".

67.Greenstein, "Why 10 Million Low Income Americans Do Not Receive Food Stamps."

68.L. Blanchard, J.S. Butler, D. Doyle and I.S. Lubitz (Mathematica Policy Research, Inc.), Final Report: Food Stamps, SSI/Elderly Cashout Demonstration Evaluation, Food and Nutrition Service, USDA, June 1982. Cited in Greenstein., "Why 10 Million Low Income Americans Do Not Receive Food Stamps.'

69.University of Kentucky, The Appalachian Center, "The Elderly of Appalachia", Appalachian Data Bank Report #3, March 1986, p. 1.

70.Hollonbeck., pp.616-621.

71.Hollonbeck, pp.616-621.

72.FRAC, "Miles to Go."

73.The Select Committee on Hunger in a recent majority report called for improved service for the elderly community. More specifically, they cited current Supplemental Security Income (SSI) pilot "cash-out" projects. See U.S. House of Representatives, Select Committee on Hunger, "Recommendations for Action Against Hunger", September 1986, pp.6-8.

74.Center for the Study of Social Policy, Working Female-Headed Families in Poverty: Three Studies of Low Income Families Affected by the AFDC Policy Changes of 1981, Washington, D.C., April 1984. Cited in Greenstein, "Why 10 Million Low Income Americans Do Not Receive Food Stamps."

75.Coe, pp. 1045-1048.

76.Public Voice for Food and Health Policy, Rising Poverty, Declining Health: The Nutritional Status of the Rural Poor, February 1986, pp. 133-141.

77.ibid.

78.The Housing Assistance Council, Taking Stock: Rural People and Poverty From 1970 to 1983, July 1984, p. 22.

79.See Community Nutrition Institute, "USDA Plans to Halve 1988 TEFAP Distribution", Nutrition Week, Vol. XVII No. 44, November 5, 1987, p. 7 and Food Research and Action Center, "Food Surplus Program Cut by 50 Percent", Foodlines, Vol. V No. 11, November 1987.

80.Food Research and Action Center, "Food Surplus Program Cut by 50 Percent", Foodlines, Vol. V No. 11, November 1987.

81.See Consumers Union press release and materials on petition to President Reagan to End Hunger in America.

82.U.S. Department of Agriculture Food and Nutrition Service (FNS), Study of the Temporary Emergency Food Assistance Program, TEFAP, April 1987.--- p.xx.

83.See FNS report.

84.FNS, p. x.

85.FNS, p. I-9.

86.House Agriculture Subcommittee, p. 6.

87.House Agriculture Subcommittee, p. 6.

88.FNS, p. xx.

89.FNS, p. xiv.

90.FNS, p. xix.

91.FNS, p. xix.

92.FNS, p.xx.

93.FNS, pp. IV-4-IV-7.

94.Michael Lipsky and Marc A. Thibodeau, Food in the Warehouses, Hunger in the Streets: A Report on the Temporary Emergency Food Assistance Program, (Massachusetts Institute of Technology, Cambridge, MA), July, 1985, p. 44.

95.Lipsky, p. 44.

96.Lipsky, p. 44.

97.Cited in Lipsky, pp.46-47.

98.FRAC, Foodlines, November 1987.

99.For documentation of the growth in demand for emergency food, see for example, Kathryn Bishop, "Soup Lines and Food Baskets: A Survey of Increased Participation in Emergency Food Programs," Center on Budget and Policy Priorities, (Washington, May 1983); Food Research and Action Center, "Still Hungry: A Survey of People in Need of Emergency Food," (Washington, FRAC, November, 1983).

100.Michael Lipsky and Marc A. Thibodeau, "Food in the Warehouses, Hunger in the Streets: A Report on the Temporary Emergency Food Assistance Program". (Cambridge, MA: Massachusetts Institute of Technology), July 1985, p. 8.

101.Information on Second Harvest was provided by John Arnold, Director of Network Services, Second Harvest Food Bank Network National Office, Chicago, Illinois, and from comments by Ed Worley, Chairman of the Board, Second Harvest, presented at the 1987 National Food Policy Conference in Washington, D.C.

102.Information on Second Harvest was provided by Phil Warth, Executive Director, Second Harvest and John Arnold, Director of Network Services, Second Harvest National Office.

ABOUT PUBLIC VOICE

Public Voice for Food and Health Policy is a national research, education and advocacy organization that promotes the consumer interest in public and private decision-making on food and health issues. Through its innovative public education, regulatory and legislative programs, Public Voice seeks to encourage effective communication about issues of special concern to the well-being of all consumers.

The worsening nutritional status and the barriers to assistance program participation experienced by the rural poor are two such issues. Embarking in these areas of research with the support of a year-long grant from the Ford Foundation, we released in 1986 "Rising Poverty, Declining Health: the Nutritional Status of the Rural Poor", a comprehensive examination of a broad spectrum of nutrition status indicators among America's rural poor. In this report, "Patterns of Risk: The Nutritional Status of the Rural Poor", we expand upon this earlier research, probing deeper into the nutritional conditions experienced by the rural poor. This study is a comprehensive data sourcebook on both food consumption patterns among the rural poor and patterns of assistance program participation.

Since its founding in 1982, Public Voice has worked for a safe, nutritious and affordable food supply for all Americans. We also have concentrated on needed reforms of current food and agriculture policy directions. Here we focus specifically on the nutritional problems of the rural poor, extending our research on food and health-related issues to an especially needy segment of our population. And we also continue our commitment to providing timely, objective analyses of critical policy issues affecting the public interest.

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